

 Industria y Comercio SUPERINTENDENCIA		SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO  No. 08-079270-00004-0000 Fecha: 2009-11-26 15:05:10 Dep. 2020 DIR.NUEVASCR Tra. 2 PATENTES Eve: 1 REGDEPOSITO Act. 400 OPOSIOBSERVTER Folios: 57	
FORMULARIO ÚNICO DE OPOSICIÓN			
1 OPOSICIÓN A SOLICITUD DE:			
☒ Patente de Invención ☐ Marca Colectiva ☐ Patente de Modelo de Utilidad ☐ Marca de Certificación ☐ Diseño Industrial ☐ Lema Comercial ☐ Esquema de Trazado para Circuitos Integrados ☐ Marcas de Productos o Servicios ☐ Denominación de Origen			
2 SOLICITUD PUBLICADA		Número del expediente: <u>08.018.270</u> Solicitante: <u>UNILEVER N.V.</u> Apoderado: <u>Alicia Lloreda Ricaurte</u> Título de la nueva creación o denominación del signo: <u>Concentrado empacado para preparar un caldo, sopa, salsa, jugo de carne o para uso como un condimento, el concentrado comprende almidón modificado.</u> Gaceta: <u>Gaceta No. 607 del 31 de agosto de 2009, página 428</u>	
3 OPOSICIÓN PRESENTADA POR:			
OPOSITOR		IDENTIFICACIÓN	
Nombre: <u>Quala S.A.</u> Dirección: <u>Carrera 68 D No. 39 F-51 Sur Bogotá D.C., Colombia</u> Nacionalidad o Domicilio: <u>Bogotá D.C., Colombia</u> Lugar de Constitución: <u>Bogotá D.C., Colombia</u> Teléfono: _____ Fax: _____ E-mail: _____		☐ C.C. ☒ NIT ☐ C.E. ☐ Otro Cúal _____ Número <u>860.074.450-9</u>	
REPRESENTANTE O APODERADO		IDENTIFICACIÓN	
Nombre: <u>Andrea Tobos Mateus</u> Dirección: <u>Avenida 19 No. 118-30 Of. 209 Bogotá, Colombia</u> Teléfono: <u>4 777355</u> Fax: <u>6 370381</u> E-mail: <u>info@martineztobospatentes.com</u>		☒ C.C. ☐ NIT ☐ C.E. ☐ Otro Cúal _____ Número <u>52.223.325</u> TP <u>148648</u>	
4 FUNDAMENTOS DE LA OPOSICIÓN		Causal: <u>Falta de nivel inventivo de acuerdo con el artículo 18 de la Decisión 486</u> Signo fundamento de la oposición: _____ Expediente y/o registro de la marca opositora (De ser marca el signo fundamento de la oposición): _____ Justificación: <u>Ver memorial anexo</u> 	
5 PRÓRROGA		☐ SI ☐ NO Comprobante de pago No. _____ Fecha: _____	
6 INVOCACIÓN DE NOTORIEDAD		☐ SI ☐ NO Comprobante de pago No. _____ Fecha: _____	

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CONCEPTO DE OPOSICIÓN

☒ SI

☐ NO

Comprobante de pago No. 09-88944

Fecha: 26-Nov-2009

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ANEXOS

☒ Comprobante de pago de la tasa.

☒ Poderes, si fuera el caso.

☒ Pruebas de los fundamentos de la oposición.

☐ Documentos que acrediten el legítimo interés , si fuere el caso.

☒ Documento que acrediten la existencia y representación legal de las partes, cuando sean personas jurídicas.

☐ Tasa de próroga

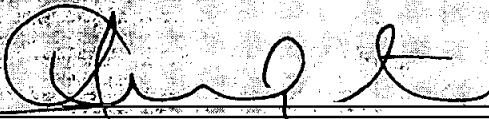
☒ Copias para traslado.

9

Nombre y firma

Nombre: Andrea Tobos Mateus

Firma



C.C. 52.223.325 Bogotá

T.P. 148648

Instrucciones para el diligenciamiento del presente formulario, ver reverso de esta página

Doctora

Alix Carmenza Céspedes de Vergel

Jefe de División de Nuevas Creaciones

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO -SIC-

E. _____ S. _____ D. _____

Referencia: Oposición a solicitud de patente de Invención

Solicitante: Unilever N.V.

Expediente No. 08.019.270

Título: "Concentrado empacado para preparar un caldo, sopa, salsa, jugo de carne o para uso como un condimento, el concentrado comprende almidón modificado"

Publicación: Gaceta 607 del 31 de agosto de 2009, página 428

OPOSICIÓN SEGÚN ARTÍCULO 42 DE LA DECISIÓN 486

ANDREA TOBOS MATEUS, mayor de edad y vecina de Bogotá, D.C., identificada según aparece al pie de mi firma, en mi condición de apoderada de la sociedad Quala S.A., domiciliada en Bogotá D.C., presento oportunamente oposición a la solicitud de patente de invención No. 08.019.270, en los siguientes términos:

I. INTERES

A mi representada, le asiste el legítimo interés para oponerse a la solicitud de patente de Unilever N.V. que se menciona en la referencia, por cuanto entre sus actividades principales se encuentran la elaboración, preparación, fabricación, procesamiento, compraventa, y en general comercialización de productos alimenticios de todo tipo. Precisamente, una de las líneas de producción de mi representada la constituyen los aderezos, caldos y concentrados alimenticios que justamente corresponde al campo de la solicitud de Unilever N.V.

II. HECHOS

2.1. El día 25 de febrero de 2008, la empresa Unilever N.V. presentó en Colombia la solicitud de patente en referencia reclamando prioridad de la solicitud europea No. 07110028 del 12 de junio de 2007 y se le asignó el número de radicación 08.019.270. Al momento de la presentación, la solicitud contenía 12 reivindicaciones.

2.2. La solicitud fue publicada en la Gaceta 607 del 31 de agosto de 2009.

2.3. El 5 de octubre de 2009, la Dra. Alicia Lloreda Ricaurte, apoderada de Unilever N.V., radicó solicitud de elaboración del examen de patentabilidad para la invención.

III. FUNDAMENTOS DE LA OPOSICIÓN

3.1. Causales

La presente oposición se fundamenta en la falta de nivel inventivo de la invención de Unilever N.V. según lo establece el artículo 18 de la Decisión 486:

"Artículo 18.- Se considerará que una invención tiene nivel inventivo, si para una persona del oficio normalmente versada en la materia técnica correspondiente, esa invención no hubiese resultado obvia ni se hubiese derivado de manera evidente del estado de la técnica."

Después de realizar una búsqueda del estado de la técnica antes de la fecha de la prioridad (12 de junio de 2007) para el objeto de la solicitud de Unilever, se identificaron los documentos: US 6.086.937 "Sauce base composition" (11 de julio de 2000), CA 2190996 "Food grade texture agent comprising particles of high-amylose starch and process for its preparation" (10 de octubre de 2006) y EP 0519104 "Gel obtained by complexing starch and an emulsifier" (23 de diciembre de 1992) que afectan el nivel inventivo de la solicitud de Unilever, por cuanto el concentrado que comprende almidón propuesto por Unilever se deriva de manera evidente de la divulgación hecha en los documentos antes mencionados.

3.2. Justificación

3.2.1. US 6.086.937 "Sauce base composition" (11 de julio de 2000).

Esta publicación se relaciona con una composición, preferiblemente grasa y continua, de consistencia para cucharear para la preparación de salsas por medio de la adición de agua y calor, que comprende 5 a 80 partes en peso de grasa, 0.5 a 15 partes en peso de ingredientes dispersables en agua, 1 a 20 partes en peso de almidón o de un producto tipo almidón, hasta 40 partes en peso de agua, componentes de sabor y, opcionalmente 0.25 a 5 partes en peso de gelatina o un hidrocoloide similar. (ver resumen)

Dicha publicación en la columna 3, líneas 51 a 59 se divulga que el almidón utilizado para la preparación puede ser modificado o no modificado y dan ejemplos de los almidones preferidos en la invención.

Así mismo, la publicación US 6.086.937 muestra un método de preparación de la salsa objeto de dicha invención en la cual, tal y como se muestra en los ejemplos I al IV, se mezclan los ingredientes y se calientan a una temperatura de 50°C en unos ejemplos ó 60°C en otros.

La invención que pretende proteger Unilever se relaciona con un concentrado empacado para preparar un caldo, consomé, etc. que según se muestra en las reivindicaciones comprende entre otros elementos: 20 a 80 % de agua, 10 a 30 % de un almidón modificado, sal y componentes que confieren sabor. El concentrado cuenta con una consistencia de gel dados los componentes del mismo y en particular del almidón.

Comparando los elementos de la publicación de Lipton y los de la solicitud de Unilever vemos que comparten elementos comunes como la existencia de almidón en proporciones similares, la existencia de agua en proporciones muy similares, y la existencia de componentes que confieren sabor al producto.

De esta manera, se concluye que las reivindicaciones 1 a 9 de la solicitud de Unilever no cuentan con nivel inventivo, según lo estipula la Decisión 486.

Así mismo, el proceso que intenta reclamar Unilever en las reivindicaciones 10 a 12, tampoco cuenta con nivel inventivo puesto que tal y como se dijo anteriormente, en la sección de ejemplos de la patente US 6.086.937 se divulga ampliamente que para obtener una salsa con los ingredientes antes mencionados, se deben mezclar los mismos y someterlos a calentamiento por un periodo de tiempo específico. Los rangos de temperatura establecidos en la patente de Lipton y en la reivindicación 12 de la solicitud de Unilever son prácticamente iguales con lo cual una persona con conocimientos medianos en el tema podría haber derivado el procedimiento descrito en las reivindicaciones 10 a 12 a partir de lo que se muestra en los ejemplos de US 6.086.937.

3.2.2. CA 2190996 *"Food grade texture agent comprising particles of high-amylose starch and process for its preparation"* (10 de octubre de 2006)

La reivindicación 1 de la publicación canadiense mencionada se refiere con un agente de textura para alimentos en la forma de partículas no cristalinas de almidón con alto contenido de amilosa estables térmicamente que tienen una estructura suave tipo gel. La reivindicación 6 del mismo documento expone que este agente de textura puede ser en la forma de una red de partículas tridimensionales de gel a una concentración de 10 a 30% en peso en fase acuosa.

Así mismo, en la sección de ejemplos de la invención se muestran preparaciones de aderezos para ensaladas y salsa mexicana que bien se parece a lo que ahora pretende proteger Unilever en la solicitud 08.019.270.

Las reivindicaciones de la solicitud de Unilever no cuentan con nivel inventivo debido a la previa divulgación hecha en esta publicación canadiense, en donde se anticipa la utilización de almidón en porcentajes de 10 a 30% en peso de la fase acuosa, tal y como se reclama en la reivindicación 1 de Unilever, para darle consistencia tipo gel a un preparación alimenticia.

De esta manera, no es posible conceder el nivel inventivo a la solicitud 08.019.270 por la previa existencia de un documento como el CA 2190996 que sirve de base para derivar de manera evidente la invención objeto de esta oposición.

3.2.3. EP 0519104 "*Gel obtained by complexing starch and an emulsifier*" (23 de diciembre de 1992)

La publicación EP 0519104 muestra un gel, especialmente para alimentos, que contiene una pequeña concentración de almidón, y que exhibe una estructura particular, especialmente una textura semisólida, debido a un incremento en su elasticidad en comparación con su viscosidad gracias a una compleja encapsulación de moléculas entregadas por el almidón.

En particular, esta invención comprueba que la adición de almidón imprime a dicho producto unas características reológicas similares a la de gel.

Concretamente, la publicación EP 0519104 es simplemente un ejemplo de las varias publicaciones que se encuentran sobre la adición de almidón a preparados para mejorar su consistencia y buscar que dicho preparado gelatinice.

De esta manera, lo que ahora pretende reclamar Unilever en la solicitud de patente 08.019.270 no cuenta con nivel inventivo puesto que una persona que trabaje en el tema de concentrados para alimentos, buscando obtener un concentrado que pudiera empacarse y guardara características tipo gelatina, pensaría en utilizar el almidón como agente gelante de la composición a partir de las pruebas y ensayos realizados en productos anteriores.

IV. PETICIÓN

En atención a los hechos anteriormente expuestos y a las pruebas aportadas, considero que es manifiesta la falta de nivel inventivo de la solicitud de Unilever N.V. y por consiguiente, comedidamente solicito a ese Despacho rechazar dicha solicitud de patente.

V. PRUEBAS

- 5.1. ANEXO A. Copia de la publicación US 6.086.937 (11 de julio de 2000).
- 5.2. ANEXO B. Copia de la publicación CA 2190996 (10 de octubre de 2006).
- 5.3. ANEXO C. Copia de la publicación EP 0519104 (23 de diciembre de 1992).

VI. DERECHOS

Adjunto el formulario único de presentación de oposición y un recibo por valor de \$287.000 correspondiente a la tramitación de la presente observación.

VII. TRASLADO

Presento con este memorial copia del presente escrito de observaciones, para su traslado al solicitante.

VIII. PERSONERÍA

Adjunto documento de poder otorgado a mi nombre por la sociedad Quala S.A., el cual me permite obrar en su representación dentro de este expediente.

IX. NOTIFICACIONES

Mi representada y yo recibiremos notificaciones en la Secretaría de la División de Propiedad Industrial, y en mi oficina situada en la Avenida 19 No. 118-30 Oficina 209 Bogotá D.C., Colombia. La sociedad demandada y su apoderado las recibirán en la dirección indicada por este último en la solicitud inicial.

Atentamente,



ANDREA TOBOS MATEUS
C.C. 52.223.325 de Bogotá
T.P. 148648



US006086937A

United States Patent [19]**Bot et al.**[11] **Patent Number:** **6,086,937**[45] **Date of Patent:** **Jul. 11, 2000**[54] **SAUCE BASE COMPOSITION**

[75] **Inventors:** **David Simon Bot, Utrecht; Petrus Gerardus Haring, Vlaardingen; Arie Johannes Plancken, Hendrik Ido Ambacht, all of Netherlands**

[73] **Assignee:** **Lipton, division of Conopco, Inc., Englewood Cliffs, N.J.**

[21] **Appl. No.:** **08/913,536**

[22] **PCT Filed:** **Mar. 28, 1996**

[86] **PCT No.:** **PCT/EP96/01392**

§ 371 Date: **Jan. 26, 1998**

§ 102(e) Date: **Jan. 26, 1998**

[87] **PCT Pub. No.:** **WO96/29894**

PCT Pub. Date: Oct. 3, 1996

[30] **Foreign Application Priority Data**

Mar. 29, 1995 [EP] **European Pat. Off.** 95200786

[51] **Int. Cl.⁷** **A23L 1/39**

[52] **U.S. Cl.** **426/589; 426/312; 426/319; 426/578; 426/601**

[58] **Field of Search** **426/589, 578, 426/312, 319, 601, 603, 604, 564**

[56] **References Cited****U.S. PATENT DOCUMENTS**

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Primary Examiner—Carolyn Paden

[57] **ABSTRACT**

A composition, preferably fat continuous, of a scoopable or spoonable consistency for the preparation of sauces by addition of water and heating, comprising 5–80 parts by weight of fat, 0.5–15 parts by weight of water dispersible milk ingredients, 1–20 parts by weight of starch or a starch-like product, up to 40 parts by weight of water, taste and/or flavor compounds, and, optionally, 0.25–5 parts by weight of gelatin or similar hydrocolloid.

14 Claims, No Drawings

SAUCE BASE COMPOSITION

BACKGROUND OF THE INVENTION

The present invention relates to a fat continuous composition suitable for the preparation of sauces by adding water or an aqueous liquid and heating, which in addition to a vegetable fat comprises a flavour, and a protein.

High quality sauces comprising a fat or fat blend, a binder material and flavour improving ingredients like spices and red or white wine, and optionally a protein material such as milk and water dispersible milk ingredients have been prepared for a long time. Such sauces have been prepared fresh, i.e. by applying fresh ingredients, preparing a food or stock and a roux, and mixing these just prior or during cooking. However, the availability of food products which allow a minor effort for their preparation, and which are of a high quality which is at least comparable to freshly cooked food products are demanded these days. In addition to the desire for high quality with minor effort, today's consumer also has demands on the health aspect of the products to use.

Some consumer groups have the demand for low trans or trans free products, in particular in view of some publications that appeared in 1993 and 1994. These publications stated that trans unsaturated fatty acid residues had effects on blood cholesterol levels more resembling that of saturated fatty acid fats (SAFA) than was previously thought.

Suppliers of edible fat spreads responded rapidly to these new demands and reformulated existing products and introduced new ones thus providing products having reduced levels of trans unsaturated fatty acid residues or even being substantially free of such trans acid residues.

The debate on trans acids renewed the interest in the influence of fat composition on the blood lipids profile, one of the main risk indicators for cardiovascular diseases.

As high quality sauces are normally prepared from butter, these are considered not to fit the pattern of omitting non-healthy food.

Now, a high quality product is found having a good taste, the taste being comparable to that of a fresh home made sauce in which butter is used, and that can be prepared with very little effort.

BRIEF SUMMARY OF THE INVENTION

The present invention regards a sauce base composition comprising 5-80 parts by weight of a vegetable fat or fat blend, the total fat composition having a trans unsaturated fatty acid residue of less than about 4%, 0, 5-15 parts by weight of water dispersible dry milk ingredients, 1-20 parts by weight of a starch or a starch-like product such as modified starch and hydrolyzed starch, up to 40 parts by weight of water, taste and/or flavour compounds, and optionally, 0, 25-5 parts by weight of gelatin or a similar hydrocolloid.

DETAILED DESCRIPTION OF THE INVENTION

The fat blend can be a blend of vegetable fats, but can also be a melange comprising fish or animal fat, the latter preferably being butter. It is, however, for this invention necessary to assure that the fat composition has a total tufar level below 4%, and preferably is substantially free of tufar. Thus, in a preferred embodiment the fat or fat blend is substantially free of tufar. The fat blend is therefore substantially composed of vegetable fats. Substantially free of trans unsaturated fatty acid residues means less than 3%, prefer-

ably less than 1% trans unsaturated fatty acid residues. The fatty acid composition of a fat is measured by GLC analysis of FAME as described in e.g. EP 78568. The trans content of fat is measured as described in JAOCS 54, (1977), 208 as elaidic acid content. The amount of particular fatty acid residues of a fat are indicated with respect to the total amount of fatty acid residues of that fat.

Parts, percentages and proportions are expressed by weight unless indicated otherwise. The amounts indicated are amounts of the products as these are commercially available, thus any crystal water present in a compound being included. Amount ranges given in this application are percentages of a sauce base comprising about 20 wt % of water. Depending on the required type of product, more or less, or even no water at all can be present in the sauce base.

Liquid oil means edible glyceride oil that is free of solid fat at 20° C., preferably at 15° C. The solid fat content of fat is indicated by N-values and can be measured as described in Fette, Seifen, Anstrichmittel 80, 180-186, (1978). The stabilisation applied is heating to 80° C., keeping at a temperature of at least 60° C. for at least 10 minutes, keeping for 60 minutes at 0° C. and keeping for 30 minutes at the measuring temperature.

Throughout this specification, the terms "oil" and "fat" are used interchangeably.

Any type of fat or fat blend can be applied, as long as the total tufar content in the fat is less than 4%. Although some structuring fat is desirable for obtaining a suitable scoopability in the sauce base composition. Preferably a fat with a solids contents of about 8 at 15° C. is to be used. Examples of suitable vegetable fat are bean oil, hydrogenated palm oil, or interesterified fats can be applied, like the ones as used in margarine blends. The use of some butterfat is desirable for flavour reasons.

In one embodiment of the invention the water dispersible dry milk ingredients are composed of 0.5-10 parts by weight of skim milk powder and 0.5-5 parts by weight of whey protein, calculated on the same basis as the milk ingredients. It does not need explanation that instead of dry milk ingredients skim milk, concentrated skim milk, ultrafiltrated skim milk, whey protein concentrate or any other form of such materials may be used, provided the same amount calculated on dry matter is added.

The product of the present invention is a sauce base composition to which upon its use, water can or has to be added in an amount depending on the desired viscosity of the final sauce. After mixing a sauce base of low viscosity is obtained. By heating this product, and maintaining the heating for about 5-120 seconds after the products starts to boil, a creamy, warm sauce of excellent mouthfeel and texture is obtained.

Suitably, to the sauce base composition water is added in such an amount that the composition which is ready for heating to obtain a kitchen sauce comprises between 30 and 80 wt % of water and preferably 40-70 and even more preferred in the range of about 50 to about 65 wt %.

In the sauce base of the present invention, other ingredients can be present which improve the quality and similarity to a high quality home cooked sauce. For example, taste and flavour improving ingredients such as salt, spices, red or white wine, or taste components thereof such as sodium lactate, sodium succinate, citric acid, sodium or potassium tartrate, sodium acetate and the like can be present in suitable amounts. Furthermore, a stabilizer such as lecithin and/or monoglyceride in an amount between 0.05 and 2 wt %, in particular between 0.1 and 1 wt % is preferably present.

Hence, in a preferred embodiment, a sauce base composition has been found which can be used in the kitchen by the simple addition of water and heating and which provides excellent taste, texture, mouthfeel and the like. In one embodiment, the sauce base comprises 40–70 wt % of a fat or fat blend, 2–8 wt % skim milk powder, 1–3.5 wt % of a whey protein, 5–12 wt % of a starch or starch derivative which has not substantially gelled, 1–5 and preferably 2–4 wt % of gelatin, 0.2–1 wt % lecithin, 3–6 wt % of a salt comprising flavour compound such as a bouillon flavour, 3–8 wt % of a red or white wine or taste components thereof in equivalent amounts, and 10–25 wt % water.

In preparing a sauce by use of the presently found sauce base composition ingredients can be added as desired, such as onions, garlic, cheese, tomatoes, spices, and the like.

The sauce base composition can be prepared as a dry, powder product which is to be mixed with water, as a concentrate to which water has to be added, or as a base sauce to which no water needs to be added. Once water has been added, if needed, the composition is to be heated, and by swelling of the binders a sauce of the desired viscosity is obtained.

Advantageously, the sauce base composition comprises 10–35 wt %, preferably 15–30 wt % water. Such a sauce base composition can easily be prepared by the use of for fat comprising food products commonly applied technology, such as preparation by the use of margarine technology, e.g. use of votators, or by the use of a Hobart mixer.

The microbiological stability of the product was found to be rather high, also for the emulsion type products, which means that the product after partial use can be used up till at least 6 weeks thereafter if stored at chill temperatures.

The water comprising sauce base composition can be a water continuous or fat continuous product, depending on the amount of fat and method of preparation used. However, a fat continuous sauce base composition is highly preferred. Such a fat continuous sauce base shows an improved microbiological stability compared to the water continuous sauce base composition. Furthermore, a sauce prepared from a fat continuous sauce base composition has a very good mouthfeel and taste.

In the sauce base composition, 1–20 wt % of a starch is present which preferably has not considerably gelled. This means that the starch in the sauce base composition has not been heated to a temperature and for a time sufficient to gel. Some gelling might have taken place during the preparation of the sauce base, e.g. upon its pasteurization. However, if the sauce base product of the invention is subjected to light microscopy analysis, starch particles are shown, which are known to be characteristic for a starch which has not gelled.

As starch material, unmodified, modified and hydrolysed starch and mixtures thereof can be applied. The use of unmodified and/or modified starch is preferred. Examples of suitable starches are maize starch, Thermflow ex National Starch, or Snowflake ex Cerestar. Preferably, starch is present in an amount between 1 and 15 wt %, more preferably between 4 and 10 wt %, without the presence of gelatine. In case gelatine is present higher amounts of starch are to be used for achieving the same consistency.

In addition to starch, one or more hydrocolloid binding materials can be present. Suitable examples are guar gum, carrageenan, agar, xanthan, pectin, LBG, CMC and the like. Depending on the presence and amount thereof of any such binders, other amounts of starch than indicated above can be preferred.

Fat can be applied in an amount between about 5 and 80 wt %. A fat continuous product being preferred, fat being

applied in an amount between 10 and 80 wt % is desired. For reasons of mouthfeel, texture, taste and consumers desire for reduced calory food products, a fat range between 20 and 70 wt % is desired, whereas for obtaining a product comparable to home prepared fresh sauces, a product comprising between 40 and 60 wt % fat is particularly desired.

It was found, however, that very good sauces can be prepared as well from a sauce base high in fat, (i.e. up to 80% or even little above) and very low or even without water. To this type of sauce base, the addition of some gas to the composition was in particular found to be very advantageous, as the benefits, in particular improved structure and scoopability were observed to be largest compared to compositions of lower fat and higher water content.

For reasons of taste and mouthfeel consistency, and appearance of the sauce 0.25–5 wt % of gelatin is present. Preferably, modified or unmodified starch and gelatin are present in a weight ratio of about 2:1 to 6:1 and preferably 3:1 to 4:1 starch:gelatin.

As a whey protein such as Lacprodan 80 ex Danmark protein can be applied. Preferably, the sauce base comprises 0.5–5 wt % of a whey protein, more preferred 1–4 wt % and particularly 2–3 wt %.

Skim milk, either as a powder or as a fluid is preferably present in an amount of 0.5–10 wt %, calculated as dry powder, more preferred 1–8 wt % and particularly 3–6 wt %.

Optionally, the fat phase comprises some monoglyceride to improve the stability of the emulsion.

For the preparation of the sauce base of the present invention, it is preferred that a water phase (or, if no water is used, the "second" phase) and a fat phase are prepared separately. In one suitable manner for preparation, to the water phase, advantageously the dry components except for fat (and, if applicable, monoglyceride and/or lecithin) are added to a heated mixture of water and, optionally, wine of a temperature of about 70–100° C., the starch is added in the end. The fat phase ingredients are heated to a temperature of about 40–80° C. In this preferred method of preparation, these phases are mixed by use of a Turrax mixer, and the mixture is added to a votator or to a so called Hobart mixer.

In still another method for the preparation of the sauce base, the fat phase, starch (component) and whey protein are mixed, and in the water phase or second phase, the other components are mixed, after which the two phases are mixed and, preferably, added to a votator and, optionally, a crystallizer unit.

If a dry powder sauce base is prepared, the ingredients can be admixed, homogenized and subsequently spray dried.

To prepare a water containing sauce base composition, advantageously use is made of one or more votators, and, optionally, crystallizers. Another advantageous method for preparation is the admixing and homogenizing in a Hobart mixer. These techniques are relatively simple and well known methods for the preparation of viscous, fat containing food products such as margarines.

By the addition of a gas such as air, carbon dioxide or preferably nitrogen, by methods well known in the art, the structure of the water containing sauce base can be altered. Without addition, a 15–25 wt % water containing product has a fairly stiff pate-like morphology, whereas the addition of a gas provides a soft, spoonable, mousse-like structure. If a gas is added, it is highly preferred that some hard fat is present in the fat composition applied in the sauce base composition.

The invention is further illustrated with the following examples.

EXAMPLE I

A kitchen sauce base was prepared as follows:

52.8% of a fat blend of 80% bean oil, 10% hydrogenated palm oil with a slip melting point of 44° C., and 10% of an hydrogenated interesterified mixture of palm oil and palm kernel oil with a slip melting point of 45° C. was heated to a temperature of 60° C., and 0.33% lecithin (bolec ztd) was added to form a fat phase.

A water phase was prepared by heating a mixture of 18.64% water and 5.5% red wine to 85–90° C., and addition of 4.4% skim milk powder, 2.0% Lacprodan 80, 3.3% gelatin 100 Bloom ex Sanofi, 4.4% bouillon flavour, 0.13% potassium sorbate, 0.79% Na lactate, 0.15% Na2 succinate, 0.03% citric acid, 0.91% K Na tartrate, 0.02% Na acetate, and, after these ingredients have been added, addition of 6.6% Snowflake 6301 ex National Starch.

The water phase was dispersed in the fat phase by use of a Turrax mixer, and the dispersion obtained was kept at 50° C.

The mixture was added to a votator (A-unit) (800 rpm, temperature at outlet 10–12° C.), a second A-unit (600 rpm, temperature at outlet 7–8° C.), and a crystallizer (C-unit) (150 rpm, t at outlet 5–7° C.), at a throughput of 4 kg/h resulting in product IA.

Product IB was obtained after having passed both A units, no C unit was applied.

The products obtained were fairly similar and spoonable. Product IA however had little structure whereas product IB had more body.

To these products, an equal amount of water was added, the ingredients mixed during heating, and the heat source was extinguished after the mixture boiled for 30 seconds. Viscosity, taste and texture were very much comparable to a home made kitchen sauce prepared with concentrated fond or stock, wine, dairy cream and starch.

EXAMPLE II

A sauce base was prepared as follows:

52.8% of a fat blend of 80% bean oil, 10% hydrogenated palm oil with a slip melting point of 44° C., and 10% of an hydrogenated interesterified mixture of palm oil and palm kernel oil with a slip melting point of 45° C. was heated to a temperature of 60° C., and 0.33% lecithin (bolec ztd) was added to form a fat phase.

A water phase was prepared by heating a mixture of 18.64% water, 5.5% red wine and 0.79% Na lactate to a temperature of 85–90° C., and addition of 4.4% skim milk powder, 2.0% Lacprodan 80, 2.6% gelatin 100 Bloom ex Sanofi, 4.4% bouillon flavour, 0.13% potassium sorbate, 0.15% Na2 succinate, 0.03% citric acid, 0.91% K/Na tartrate, 0.02% Na acetate, and, after these ingredients have been added, addition of 7.3% Snowflake 6301 ex National Starch.

The water phase was dispersed in the fat phase by use of a Turrax mixer, and the dispersion obtained was kept at 50° C. The mixture was passed through a votator (A-unit) (400 rpm, temperature at outlet 10–12° C.), a second A-unit (800 rpm, temperature at outlet 7–8° C.), and a crystallizer (C-unit) (125 rpm, with a temperature at outlet of 5–7° C.), the line being operated at a throughput of 4 kg/h. The product obtained (product IIA) was fairly rigid but scoopable.

To the above obtained scoopable product, an equal amount of water was added, the ingredients were mixed

during heating, and the heat source was extinguished after the mixture boiled for 30 seconds. Viscosity, taste and texture were very much comparable to a home made kitchen sauce.

EXAMPLE IIB

The mixture obtained from the Turrax mixer was passed through a votator (A-unit) (400 rpm, temperature at outlet 22–24° C.), a second A-unit (600 rpm, temperature at outlet 17–19° C.), and a crystallizer (C-unit) (125 rpm, t at outlet 14–15° C.) at a throughput of 8 kg/h.

The product obtained was similar to that of Example IIA.

To this product, an equal amount of water was added, the ingredients mixed during heating, and the heat source was extinguished after the mixture boiled for 30 seconds. Viscosity, taste and texture were very much comparable to a home made kitchen sauce.

EXAMPLE IIC

The same process as IIA was repeated although N₂ was injected before the crystallizer at a rate sufficient to obtain an overrun of 50% (i.e. 25 vol % N₂). This resulted in an improved scoopability, and further easyness with respect to the mixing of the product with water to obtain the kitchen sauce.

EXAMPLE III

A kitchen sauce base was prepared as follows, the percentages indicated are weight percentages based on the total weight of the end product (sauce base) obtained after mixture of the fat and water phase unless indicated otherwise:

Preparation of the fat phase:

59.6% of a fat blend of 60% bean oil, 21% sunflower oil, and 19% of an hydrogenated interesterified mixture of palm oil and palm kernel oil with a slip melting point of 44° C. was heated to a temperature of 60° C. Thereto, 0.33% lecithin (bolec ztd), 7.3% of modified starch ex National Starch, 2% whey protein, and 0.0024% of B-caroteen(10%) were added to form a fat phase.

A water phase was prepared using 18.94% water, 3.5% of a savoury flavour, 4.4% skim milk powder, 2.6% gelatin (250 Bloom, ex Sanofi), 0.13% potassium sorbate, 0.91% K Na tartrate, and 0.02% of caramel powder and some minor amount of Na acetate, citric acid and Na-succinate were mixed until a homogeneous aqueous mixture (pH 4.7) was obtained.

The water phase was dispersed in the fat phase by use of a Turrax mixer, and the dispersion obtained was kept at 60° C. The so obtained mixture was added to a votator (A-unit) (1000 rpm, temperature setpoint 22° C.), a second A-unit (1000 rpm, temperature setpoint 20° C.), and a crystallizer (C-unit) (75 rpm), at a throughput of 60 kg/h. This product was then added to an A-unit to which 10% nitrogen (based on the total weight of the composition) was dosed (A unit operated at 1000 rpm, temperature setpoint 16° C.), and subsequently to a C-unit operated at 100 rpm.

A margarine like sauce base which was very well scoopable was obtained, which upon addition of about 130 cl water per 100 gr of sauce base, heating and stirring in a sauce pan resulted in an excellent, well tasting sauce of good texture, very much comparable to a home made kitchen sauce prepared with concentrated fond or stock, dairy cream and starch.

EXAMPLE IV

A kitchen sauce base was prepared as follows, the percentages indicated are weight percentages based on the total

weight of the end product (sauce base) obtained after mixture of the fat and water phase unless indicated otherwise:

Preparation of the fat phase:

78.5% of a fat blend of 60% bean oil, 21% sunflower oil, and 19% of an hydrogenated interesterified mixture of palm oil and palm kernel oil with a slip melting point of 44° C. was heated to a temperature of 60° C. Thereto, 0.42% lecithin, 9.2% of modified starch, 2.5% whey protein, and 0.003% of 10% B-carotene were added to form a fat phase. A second phase was prepared using 3.779% of a savoury flavour compound, 5.54% skim milk powder, and 0.025% of caramel powder were mixed until a homogeneous aqueous mixture was obtained.

The phases were mixed by use of a Turrax mixer, and the mixture obtained was kept at 60° C.

This product was then processed as described for the mixture obtained in Example III.

A good sauce base was formed which was easy scoopable, even though no water was added! To this mixture, about 200 cl of water were added per 100 gr sauce base. Upon heating, boiling for about 30 seconds and stirring, a pleasant, well tasting sauce of good structure and texture was obtained.

What is claimed is:

1. A fat continuous composition suitable for the preparation of sauces, which in addition to fat comprises a flavour and a protein, characterised in that the composition is a sauce base comprising 5-80 parts by weight of a vegetable fat or fat blend, the total fat composition having a trans unsaturated fatty acids residue level of less than 4%, 0.5-15 parts by weight of water dispersible dry milk ingredients, 1-20 parts by weight of a starch or starch-like product selected from the group consisting of, a starch derivative, modified starch and hydrolyzed starch, up to 40 parts by weight of water, and taste and/or flavour compounds, said sauce base having been treated with a gas selected from the group consisting of air, carbon dioxide and nitrogen.

2. Fat continuous composition according to claim 1, characterised in that the fat composition is substantially free of trans unsaturated fatty acids.

3. Fat continuous composition according to claim 1, characterised in that it comprises a stabilizer such as lecithin in an amount between 0.05 and 2 wt %.

4. A composition in accordance with claim 3, wherein said lecithin is present in an amount between 0.1 and 1 wt. %.

5. Fat continuous composition according to claim 1, characterised in that it comprises 40-70 wt % of a fat or fat blend, 2-8 wt % skim milk powder, 1-3.5 wt % of a whey protein, 5-12 wt % of a starch which has not substantially gelled, 2-4 wt % of gelatin, 0.2-1 wt % lecithin, 3-6 wt % of a salt comprising flavour compound, 3-8 wt % of red or white wine or equivalent amounts of taste components thereof, and 15-25 wt % water.

6. Fat continuous composition according to claim 1, characterised in that the composition contains modified starch.

7. Fat continuous composition according to claim 6, characterised in that 0.25-5 wt % of gelatin is present.

8. Fat continuous composition according to claim 7, characterised in that modified or unmodified starch and gelatin are present in a weight ratio of 2:1 to 6:1.

9. A composition according to claim 8, wherein said modified or unmodified starch and gelatin are present in a weight ratio of 3:1 to 4:1 starch:gelatin.

10. Fat continuous composition according to claim 1, characterised in that starch is present in an amount between 1 and 15 wt %.

11. A composition according to claim 10, wherein said starch is present in an amount between 4 and 10 wt. %.

12. Fat continuous composition according to claim 1, characterised in that fat is present in an amount between 40 and 60%.

13. Sauce characterized in that it is prepared by adding water or an aqueous liquid to the composition according to claim 1 and heating the so obtained mixture.

14. A composition according to claim 1, which further comprises 0.25-5 parts by weight of gelatin or a similar hydrocolloid.

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(73) SOCIÉTÉ DES PRODUITS NESTLÉ S.A.
Entre-Deux-Villes P.O. Box 353 CH-1800 VEVEY
XX (CH).

(72) BAENSCH, JOHANNES (SG).
GUMY, DIDIER (CH).
SIEVERT, DIETMAR (CH).
WURSCH, PIERRE (CH).

(74) ROBIC

(54) PARTICULES D'AMIDON A TENEUR EN AMYLOSE ELEVEE COMPRENANT UN AGENT DE TEXTURE DE
CATEGORIE ALIMENTAIRE ET SON PROCEDE DE PREPARATION
(54) FOOD GRADE TEXTURE AGENT COMPRISING PARTICLES OF HIGH-AMYLOSE STARCH AND PROCESS
FOR ITS PREPARATION

(57)

The food grade texture agent of the invention is in the form of thermally stabilized swelling resistant and non crystalline particles of high amylose starch, which present a gelled soft structure, in which the amylose content of the starch is of 40 to 70 %, and in which 90 % of the particles have a diameter in the range of 5 to 30 microns. This agent can be prepared by suspending the high amylose starch in water, heating the slurry thus obtained to about 80-100.degree.C, preferably 90-100.degree.C, under continuous controlled stirring without shearing but sufficient to avoid particle aggregation and so as to form the aimed particle gel product, and cooling said product. It can be used in food preparations as fat replacer and/or whitening agent.



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(72) Inventeurs/Inventors:
BAENSCH, JOHANNES, SG;
GUMY, DIDIER, CH;
SIEVERT, DIETMAR, CH;
WURSCH, PIERRE, CH

(73) Propriétaire/Owner:
SOCIETE DES PRODUITS NESTLE S.A., CH

(74) Agent: ROBIC

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(54) Title: FOOD GRADE TEXTURE AGENT COMPRISING PARTICLES OF HIGH-AMYLOSE STARCH AND PROCESS
FOR ITS PREPARATION

(57) Abrégé/Abstract:

The food grade texture agent of the invention is in the form of thermally stabilized swelling resistant and non cristalline particles of high amylose starch, which present a gelled soft structure, in which the amylose content of the starch is of 40 to 70 %, and in which 90 % of the particles have a diameter in the range of 5 to 30 microns. This agent can be prepared by suspending the high amylose starch in water, heating the slurry thus obtained to about 80-100 °C, preferably 90-100 °C, under continuous controlled stirring without shearing but sufficient to avoid particle aggregation and so as to form the aimed particle gel product, and cooling said product. It can be used in food preparations as fat replacer and/or whitening agent.

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(72) Inventors; and (73) Inventors/Applicants (for US only): BAENSCH, Johannes (DE/SG); 202 Pestr Pajang Road, Landridge Condo, Singapore 0511 (SG); GUMTY, Didier (CH/CH); Vudalla 20, CH-1630 Bulle (CH); SIEVERT, Dietmar (DE/CH); Chemin de la Cure 3, CH-1092 Belmont (CH); WÜRSCH, Pierre (CH/CH); Chemin de la Craux 64, CH-1814 La Tour-de-Peilz (CH).		Published With international search report. 2190996	
(74) Agent: MICHELI & CIE 122, rue de Genève, Case postale 61, CH-1226 Thoiry (CH).			
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(57) Abstract The food grade texture agent of the invention is in the form of thermally stabilized swelling resistant and non crystalline particles of high amylose starch, which present a gelled soft structure, in which the amylose content of the starch is of 40 to 70 %, and in which 90 % of the particles have a diameter in the range of 5 to 30 microns. This agent can be prepared by suspending the high amylose starch in water, heating the slurry thus obtained to about 80-100 °C, preferably 90-100 °C, under continuous controlled stirring without shearing but sufficient to avoid particle aggregation and so as to form the aimed particle gel product, and cooling said product. It can be used in food preparations as fat replacer and/or whitening agent.			

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the industry, more particularly so as to develop fat substitutes that have as far as possible the right combination of taste and mouthfeel. This problem can be partially resolved by replacing fat by carbohydrate and protein based ingredients which have a lower caloric value and allow an increase in the water content. However, a good fat-mimetic system tries to achieve the viscous-lubricitious-absorptive profile of the fat itself. Since this cannot be readily accomplished with any single ingredient except for the synthetic fat substitutes, the most practical way to accomplish this is by using a combination of materials that can supply the desired sensory properties. They generally consist in a combination of water with thickening agent, soluble bulking agents and/or microparticulate components, with or without surface active lipids, the whole producing a creamy texture. The microparticulates provide a ball-bearing effect which improves and smoothes out the flow properties of the fat-replacer system and thus enhances the fatty perception of the food. They are usually insoluble materials, typically smaller than 3 microns, which are not perceived as particles by the tongue. The best known is microcrystalline cellulose, which was developed in the early 60s. More recently, the microparticulated proteins of egg, whey and milk protein have been proposed for such applications, but the choice of microparticulate components derived from starch is very limited and they are very expensive (see for example M. Glicksman in Food Technol. 45, 94-103, 1991), as well as EP-A-0,486,936 and WO-A-91/07106.

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The purpose of the present invention is therefore to provide a new kind of food grade texture agent which presents all the characteristics to be usable as a fat and/or oil replacer, especially to produce a fatty mouth-feel and which can be produced in a relatively easy and unexpensive manner avoiding the use of solvents and/or other chemicals.

The present inventors have now unexpectedly found that high amylose starch in the form of particle gel having an average diameter of at least 3 microns is fulfilling the above requirements, and can be further obtained by a method involving the only combined action of heat and mechanical treatment.

Consequently, the first object of the present invention is a food grade texture agent in the form of thermally stabilized swelling resistant and non crystalline particles of high amylose starch, which present a gelled soft structure, in which the amylose content of the starch is of 40 to 70%, and in which 90% of the particles have a diameter in the range of 5 to 30 microns.

According to a second object of the invention, the above-defined texture agent is usable in food preparations as fat replacer. It can also be used in such food preparations as a whitening agent.

A third object of this invention consists in a process for the preparation of the above-defined food grade texture agent, which comprises the steps of suspending the high amylose starch in water, heating the slurry thus obtained at about 90 to 100°C, preferably 95-100°C, under continuous controlled stirring without shearing, but suf-

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sufficient to avoid particle aggregation and so as to form the aimed particle gel product, and then cooling said product. The stirring must effectively be such that a high shearing is avoided which could destroy the particles. However, the stirring has to be sufficient to avoid particle aggregation during the heat treatment and to thus allow the stabilization of the particle structure.

Preferably, the process includes a second heating step up to 40 to 80°C.

The above process can be advantageously carried out under a pressure of about 0.3 bar. Each step of this process can be of about 30 min. for the first heating up to 95-100°, maintaining said temperature during about 30 min, cooling the product obtained up to about room temperature within about 25 min, further heating said product up to 40-80°C within about 15 min., and cooling it again within about 5 min. to room temperature.

The particulate product of the invention is thus obtained in the form of grains having a gelled soft structure, which retained in fact the non cristalline structure of the starting starch used. The particles have not been chemically modified nor altered by the controlled thermal and mechanical treatment, and have proven to be resistant to shearing, heating (upto 125°C) and acid, as well as swelling resistant, for example in aqueous medium up to 120°C. The average diameter of the particles is of about 15μ, whereas the particles size distribution is such that 90% of the particles have a diameter in the range of about 5 to 30μ. Despite the fact that the above sizes are somewhat above the usual size of particles to be perceived by

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the tongue, the particulate starch according to the invention is practically not perceived as particles by the tongue thanks to the gelled soft structure thereof, and thus constitute a perfect fat-mimetic system to be used in food preparations.

The product of the invention can also further be dried and obtained in a dehydrated powdered form to be reconstituted in water, for example either by freeze-drying and milling or by spray-drying. In this latter case, maltodextrine can be advantageously added prior to drying so as to improve the process, preferably in a ratio of 1:0.5 to 1:1 to the high-amylose starch.

It can also be in the form of a tridimensional particle gel network at a concentration of about 10 to 30% wt in an aqueous phase.

According to another embodiment of the present invention, a modified food grade texture agent can be obtained by starting from a mixture of high amylose starch and cereal flour, like rice flour, so as to lead to improve the sensory properties (flavour, taste) of the final product. The high amylose starch/cereal flour ratio depends on the desired texture and flavour properties of the aimed final product. For example, a 1:1 ratio in the case of rice flour was found to give good results with regards to texture (creaminess) and flavor. The rice flour masks the off-flavor of high amylose starch and this latter suppresses the rice flavor. Of course, other appropriate cereals grains may be used in conjunction with the present invention, including for example corn, wheat, oat, barley, buckwheat, rye, sorghum and millet.

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As to the process of preparation with the above mixture is concerned, the same conditions apply as those already recited, eventually involving a slightly lower heating temperature in some particular cases, i.e. between about 80° and 100°C.

The conditions used according to the present invention are aimed to a partial gelatinization of the high amylose starch and full gelatinization of the starch of cereal flour. Full gelatinization of the high amylose starch, e.g. by high temperatures, as well as complete disruption and loss of integrity of the high amylose starch granules by applying high pressure or high shear mixing should be avoided. The continuous mixing action during the heating and cooling prevents the formation of a continuous polymer gel network and the formation of starch aggregates during processing. Thereby, homogenous products are obtained. Modification of the starch in accordance with this invention is thus achieved only by the combined action of heat and mechanical treatment, no additives other than water being required.

In the process according to the present invention, one important parameter is constituted by the stirring conditions, which have to involve a shearing effect so as to avoid an aggregation of the particles during the whole process, but especially during cooling, said aggregation having negative consequences, i.e. syneresis and hardening of the gel. Despite the fact that high amylose starch gelatinises only partly at around 100°C, a sufficient stirring is thus needed to avoid aggregation of the granules. On the other side, it is also further to avoid a

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too high shearing effect which could destroy the structure of the particles.

Two main types of reactions can be used, as providing the appropriate shearing conditions : a first one having a specific conic geometry with scraping and connecting recycling effect, and a second one which have a cylindrical geometry and a special vertical blades arrangement.

10 More particularly, the following two pilot plant reactors have been advantageously used :

- (1) Becomix* (A. Berents GmbH & Co KG, Stuhr/Bremen, Germany (with conic geometry)

20 A maximum of 10 lt starch slurry can be processed. The slurry can be homogenised and/or thoroughly mixed. Only the mixing mode was used : one kg of starch was suspended in 4 lt water; the slurry was heated in a double jacket form ambient to 80-100°C within 30 minutes, depending on the raw material, the pressure being maintained at 0.3 bar; the slurry was kept for 30 min at 80-100°C and then cooled to 20-30°C; a second heating cycle at 40°C gave a smoother gel.

- (2) MBR Reactor (Bio-Reactor AG, Switzerland) (cylindrical geometry)

30 A maximum of 5 lt starch slurry can be processed. Thorough mixing is achieved by rotating blades at 200 rpm, heating and cooling temperature and mixing speed can be manually adjusted via a control unit. Processing of the starch slurry is done under the same conditions as described for Becomix.

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For the preparation of small quantities of product, another reactor has been used in laboratory (bench scale), i.e OCI Omni-Mixer (Omni International, Waterbury, CT, USA) in which high amylose starch or blend of high amylose starch and native starch (such as rice starch/flour, wheat starch, potato starch) were prepared as followed : 20g of starch or blend of starches were suspended in 80 ml water. The slurry was transferred into the mixing chamber of the
10 Omni-Mixer* with knife blades rotating at 1000-2000 rpm. The starch slurry was heated by immersing the chamber in an oil bath maintained at 100°C for 30 minutes. Then, the mixing chamber was placed in a water bath under continuous mixing for 10 minutes. Finally, the mixing chamber was immersed in an ice bath for 10 minutes.

Although enzymes are not at all required to carry out the process to prepare the products according to the present invention, they can be nevertheless used in
20 certain cases for modifying the texture where it is important to somewhat reduce the viscosity and/or the particle size of the final product. Amylolytic enzymes can thus be employed, such as α -amylases, and added at the 0.05-1.5 % level (50-500U/20g starch) in case of high amylose starch alone and at the 0.003-0.1 % level in case of a mixture high amylose starch and rice flour.

However, where enzymes are used in the preparation process, it is then necessary to have a final heating step
30 up to about 80-125°C, preferably about 80°C, during about 30 min., and to carefully check, for example by the standard Phadebas-method, that no residual α -amylase activity can be detected. Practical tests have shown that

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the use of pancreatic α -amylase (200 U/20 g starch) in the production of the high amylose starch preparation leads to a reduction in particle size (measured with a Malvern scattering instrument) and viscosity (measured with the Carri-Med controlled stress rheometer) of the final product. No aggregation of particles and phase separation (syneresis) was noted over a 7 days storage period at 4°C.

The high amylose starch product according to the present invention has the following attributes : homogenous, smooth, creamy texture, no sticky-pasty consistency, white colour, opaque, high sheen, resistant to acid, thermoreversible. Culinary applications have been performed as fat replacer, for example in Bechamel sauce (28% energy reduction), mayonnaise (34%), French salad dressing (26%), low fat yoghurt, etc. The particle starch is further characterized by a strong whitening effect, for example in low-fat mayonnaise.

Furthermore, due to the very high content of amylose, about 30 to 50% of the particulate starch is resistant to digestion and thus will be slowly fermented by the large intestine like dietary fibres. The remaining starch is very slowly digested by the pancreatic α -amylase.

It can thus even be envisaged to use the particulate starch according to the present invention in liquid or semi-liquid formulas for diabetics, as well as possibly for the treatment of ulcerative colitis.

It is finally very important to note that the particulate starch according to the invention can be sterilized in either form, i.e. as a gel or as a reconstituted aqueous suspension, the particulate structure being

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maintained after such sterilization, so that it can be stored in a stable form during several months, at least more than 6 months.

The present invention will now be described in more details and illustrated by the following examples.

Example 1 : Preparation and properties of the particulate starch

10 As starting products for the preparation of the aimed particular starch, two different kinds of native high amylose starch have been used, i.e. "Eurylon*VII" (from Roquette, Lestrem, France) containing 70% amylose and "Amaizo*2568F" (American Maize Product CO., Hammond, IN, USA) containing 45-50% of amylose.

20 Other products have been used in this example, such as native potato starch, wheat starch and rice starch (From Sugro*AG, Basel, Switzerland), native rice flour "MP-40 Siam Patna" (from Häfliger, Switzerland) and native "Prowashonupana" (PWSNP) barley flour (from Con Agra, Omaha, USA), which contains waxy starch and 17% β -glucan (hydrocolloid) as well as α -amylase "B-100" (from Gist-Brocades, Delft, Netherlands) having an activity of 18000RAU/S.

30 In order to determine the more appropriate practical processing conditions for obtaining the product of the invention, several samples of the particulate starch have been prepared and tested; more particularly size distribution of the particles, rheology of the concentrated gels and other analysis have been carried out.

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(a) Size distribution was performed with a laser light scattering Malvern Mastersizer* IP (Malvern Instruments, Worcs, UK) equipped with a 300 mm focal length. 5 ml of freshly prepared gel was diluted in 50 ml H₂O and stirred overnight. To obtain a minimum obscuration of 0.15, about 7-12 ml was introduced in the sample presentation unit, which contains bidistilled water, mixed at a speed of 80 % and pumped at a speed of 80% into the optical cell.

10 (b) Rheological measurements were carried out with a Carri-Med* CSL 100 controlled stress rheometer (Carri-Med Ltd, Dorking, UK) operating at a frequency of 1 Hz with a parallel-plate geometry (4 cm, 1 mm gap). The torque sweep test was performed from 1 to 30 Pa in 20 steps at 20 °C.

20 Storage modulus G' and phase shift δ were read from the linear viscoelastic domain. The 20 % w/w starch gel was also characterized after shearing with a small Polytron* (Ultra-Turrax, Janke & Kunkel AG, IKA WERK, Staufen i. Breisgau, Germany) at speed 2 for 30 s, and one day after shearing. The 20 % w/w starch gel was characterized after heating for 30 min at 100 °C and one day after heating. Finally, evolution of the gel stored at 4°C was measured up to 7 days.

30 (c) Other analytical methods were used, such as more particularly in the case of the starch product prepared with enzymes the reducing sugar method (maltose determinations) from Somogyi (J. Biol. Chem. 195, 19, 1952), and the detection of the residual α -amylase activity with the Phadebas* Amylase test (Pharmacia Diagnostics AB, Uppsala, Sweden).

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The starch products prepared with enzymes had dextrose equivalents of less than 3. The term dextrose equivalent, abbreviated as DE describes the degree of conversion of starch to a starch hydrolysate. It is defined as the percentage of reducing sugars in a product, calculated as glucose, on the dry weight basis of the product. Native starch has a DE of about 0, glucose powder has a DE of 100.

Also scanning electron microscopy (SEM) was used on dry starch sprinkled onto Leit-c and sputtered with gold. Starch gel was enclosed in a deep-well stub, washed for 2 hours in distilled water, fixed on glutaraldehyde, dehydrated via acetone and critical-point-dryer.

From the several various trials carried out with the above-mentioned starting products and applying various processing conditions, it resulted that one of the essential parameter to obtain the desired particulate starch is the heating temperature; the optimal temperature range with high amylose starch alone is between 90 and 100°C, more particularly 90 to 95°C with "Amaizo" and 95 to 100°C with "Eurylon", whereas this temperature range can be somewhat lowered until 80 to 90°C when the high amylose starch is mixed with rice flour for example.

Of course, and as already stated before, the stirring and shearing conditions during heating and cooling are very important to avoid aggregation of the product.

In practice, the initial ratio of high amylose starch to water is about 10 to 30% weight when used alone, and of about 2,5 to 15 % weight when used with rice flour for ex-

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ample, this latter been used at a ratio of about 5 to 15 % weight.

As to the properties of the high amylose starch products obtained by the various trials carried out, they can be summarized as follows :

(a) The particulate starch products consist in swollen, partially gelatinised high amylose starch granules which are loosely associated with one another, thereby forming a three-dimensional particle gel network throughout the aqueous phase. The starch product has the following attributes :

- smooth, creamy texture; homogeneous, no sticky-pasty consistency;
- creamy consistency at solids level > 17 % (d.m.);
- salad-dressing type consistency between 13-17 % solids;
- white colour, opaque, high sheen;
- stable during a two week storage; syneresis can be reversed by mixing the product;
- resistance to acid;
- resistance to shearing and to heating;
- thermoreversibility : heating the product to 95°C for 30 min. reduces slightly the gelling properties; during cooling to room temperature, the gelling properties (solid like structure) do not recover, but storage overnight in the refrigerator leads to full recovery of the gelling, solid like properties; a second heating gives a more elastic, more creamy gel.

(b) Scanning electron microscopy shows the structure of the dry particulate starch, which has a soft structure,

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whereas gelled starch exhibits a pitted surface structure with amylose residues attached.

(c) An off-flavour in the high amylose starch can be perceived. In food preparations, this off-flavour very often disappears due to the low concentration used or due to masking of the off-flavour by other food constituents. It was also found that incubation of the starch preparation with lactic acid bacteria improves the flavour of the preparation.

(d) Starting from a mixture of high amylose starch and rice flour leads to an improvement of the sensory properties (flavor, taste) of the final product. The high amylose starch/rice flour ratio used depends on the desired texture and flavour properties of the final product. A 1:1 to 1:4 ratio, preferably about 1:1, of high amylose starch and rice flour was found to give good results with regard to texture (creaminess) and flavour. Generally, the rice flour masks the off-flavour of high amylose starch and the high amylose starch suppresses the rice flavour. A smooth, creamy texture develops over two to three days storage at refrigerator temperature, as a result of amylopectin retrogradation.

(e) Regarding the particles size distribution, the results obtained with "Eurylon" are as follows :

- starting product (Eurylon) : 90% between about 2 and 15 microns (about 10% < 2 μ).
- after first heating step : 90% between 6 and 60 microns.
- particulate starch of the invention : 90% between about 5 and 30 microns (about 10% > 30 μ).

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The high amylose starch/rice flour product consists of swollen, partially gelatinised high amylose starch granules and a phase comprising water, fully gelatinised rice starch, denatured rice protein, and other rice flour components. The presence of partially gelatinised high amylose starch granules in the product prevents the formation of a continuous polymer gel of gelatinised rice starch. The product characteristics are :

- smooth and creamy texture;
- bland flavour and taste (no perceived flavour problem);
- no syneresis;
- the gel is softer than high amylose product;
- the gel resists to shearing and heating.

Scanning electron microscopy shows whole high amylose starch granules recovered with disrupted rice starch granules which form a weak network. Interactions between high amylose starch granules is less pronounced. The network formed is less sticky and more creamy than in low amylose products.

The particle size of the rice flour is important with regard to sensory properties (graininess) and structure formation (gel strength). The particle size of the rice flour is preferably below 100µm. Regular rice flour with a significant proportion of particles >180µm can also be used. Then, homogenisation (e.g. colloid mill, homogenise, high shear force mixing) of the rice flour with water (weight ratio 1:8) should be carried out prior to mixing the rice flour/water slurry with the high amylose starch in the 9:1 ratio. This mixture is then processed as des-

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cribed about for the dry mixture of high amylose starch and rice flour.

(e) A wide range of particle size flour 1 to 100 μm is obtained. Although a particulate gel is not perceived below about 3 μm , the particulate system contained at least about 95 % of particles bigger than 3 μm , but less than about 5 % of particles bigger than 70 μm . The average size of the particles can be generally ranged between 10 and 20 μm , preferably about 15 μm ; in other words, 50 % of the total volume distributions is generally smaller than about 15 μm .

Example 2

High amylose starch (250g) and high fiber Prowashonupana barley flour (250g) which contains 18 % β -glucan were prepared in the Becomix reactor as described for the high amylose starch/rice flour mixture. The product obtained has a brownish colour, a creamy texture and is stable (no syneresis) over a 7 days storage. This product is also shear and freeze/thaw stable. Probably, the waxy PWSNP barley starch and β -glucan contribute to this stability.

Example 3

This example illustrates the production of dehydrated particle starch by spray-drying. Suspensions are prepared of 2 kg "Eurylon VII" in 8 kg water, respectively of 2 kg "Eurylon" and 1 or 2 kg maltodextrin (DE 6 to 12) in 6 kg water.

The suspensions are heated in the Becomix reactor as explained in Example 1. At the end, each suspension is

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dried in a spray tower under the following conditions : rotational speed 20000-23000 rpm, inlet temperature 150-165°C, outlet temperature 75-85°C.

As a result of the drying proceeding in the above conditions, it appeared that the dehydrated particle starch obtained with a prior mixing with maltodextrin is giving after reconstitution as a suspension in water a creamy and smooth product, whereas that without maltodextrin is rough and presents aggregates. It has also been shown that the addition of maltodextrin prior to drying hinders the swelling of the high-amylose starch granules during the heating steps, so that a narrower distribution of particle size is obtained and the further dispersion of the starch is facilitated, avoiding the formation of lumps.

Furthermore, it was demonstrated that a 5 % suspension in water of the product thus dehydrated can be sterilized (at about 120°C) and lead to a very stable suspension, the particulate structure being preserved.

Example 4 - Bechamel sauce

This example illustrates the use of high amylose starch in a Bechamel sauce recipe with reduced calories.

More particularly, high amylose starch (Eurylon VII or Amaizo 2568F) or high amylose starch and rice flour was stirred (80-130rpm) and heated (80-100°C) in water as described before in a Becomix reactor, maintained at the appropriate temperature during about 10 min., and then cooled to 20°C (90-130 rpm).

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The other usual ingredients of the sauces (milk powder, maize starch, species, aroma, etc) were added and the mixture was heated a second time at about 80°C, still under constant stirring (about 105 rpm) and then cooled again. The sauces obtained were kept in jars at 4°C before the tasting and the rheological evaluation.

A Bechamel reference was also prepared as follows : sunflower oil was mixed with water (3,4 % wt.) and the suspension was stirred (105 rpm) during a few minutes. Then the other usual ingredients mentioned above were added and the mixture was heated at 95°C during 10 min under constant stirring (95 rpm). After cooling still under stirring (105 rpm), the sauce was put in jar and kept at 4°C.

The various prepared Bechamel sauces have then been tasted, as well as the reference, after having been heated in a water-bath at about 65°C. A panel of 12 experienced sensory accessors was used to evaluate several times the samples. More particularly, the sauces samples were evaluated for their respective appearance, colour, texture, taste and mouthfeel. The results of these evaluations are reported in the following Table 1.

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Table 1

Type of Starch	Concentration (%wt)	Calories (kcal/100g)	Evaluation of the texture versus reference
Eurylon VII	0.5	51	+ fluid; - thick
Eurylon VII	2.0	58	+ gelified; + elastic
Eurylon VII/rice flour	0.1/0.4	51	similar
Eurylon VII/rice flour	0.6/1.7	58	+ thick; + gelified
Amaizo 2568F	0.5	51	- gelified; - coating
Amaizo 2568F	2.0	58	+ gelified; + thick
Amaizo 2568F/rice flour	0.1/0.4	51	similar
Amaizo 2568F/rice flour	0.6/1.7	58	+ thick; + gelified
Reference		80	

It appears from the above Table 1 that the mixtures high amylose starch/rice flour 0.1/0.4 are the most near from the reference, but with a caloric reduction of about 30 %.

On the other hand, it has also shown that addition of native high-amylose starch, i.e. non treated according to the invention, directly into the Bechamel sauce resulted in a grainy texture caused by starch granules aggregation which occurs during the heating process.

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Example 5 Mayonnaise

This example illustrates the preparation of a fat calorie reduced mayonnaise, wherein the high amylose starch and high amylose starch/rice flour products were used as fat replacers. The high amylose product also serves as whitening agent. The mayonnaise formulation is reported in the following Table 2.

Table 2

Ingredients	Control (%)	Sample 1 (%)	Sample 2 (%)
Water	68.4	68.4	68.4
Sunflower oil	10.0	2.0	2.0
Vinegar, mustard	11.0	11.0	11.0
Skim milk powder, whey protein conc.	7.0	7.0	7.0
Hydrocolloids, aroma, spices	3.6	8.6	8.6
HA-starch product	-	3.0	-
HA-starch/rice flour product (1:1)	-	-	3.0
Calories (kcal)	122	78	78

Sample 1 : prepared with the high amylose (HA)-starch product

Sample 2 : prepared with the high amylose (HA)-starch/rice flour product.

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Hydrocolloids were slurried in a portion of the oil and mixed with water. All dry ingredients were slowly added to the blend under thorough mixing. Then, the remaining oil, vinegar, mustard, and the developed starch products (HA-Starch and HA-Starch/rice Starch) were added separately with mixing. This mixture was heated to 93-95°C under continuous agitation and then allowed to cool.

Evaluation of the mayonnaise preparations (round table tasting) :

Control : smooth, creamy consistency, slightly transparent, no syneresis.

Sample 1 : comparable to control in texture and taste; white colour, no syneresis.

Sample 2 : less thick than control, smooth, slight cereal flavour, no syneresis.

Example 6 : Yoghurt

This example shows the preparation of standard yoghurt, fat reduced yoghurt and yoghurt containing high amylose starch product as texture agent and fat replacer.

Yoghurt were prepared from retail milk, skim milk powder, sugar, water and the high amylose (HA)-starch product. The ingredients were blended together with a wire whip. The resulting mixtures were heated to 85°C in stainless steel beakers, held at this temperature for 30 min. cooled to 40-42°C, and then inoculated with 2 % bulk starter and cultured. The yoghurt was then stirred, poured into containers and cooled overnight, thereby achieving a final pH of 4.5.

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Table 3 : Yoghurt formulation

Ingredients	Control	Sample
	(%)	(%)
Water	90.0	-
Milk	-	89.5
Skim milk powder	2.0	-
Sucrose	6.0	6.0
Inoculum	2.0	2.0
HA-starch product	-	2.5

Sensory evaluation (round table tasting) :

The sample was comparable to the control yoghurt with regard to the typical yoghurt flavour and textural attributes (smooth and creamy). The sample was however preferred for its white colour, and clean and fresh taste.

Example 7 : Mexican sauce

This example illustrates the preparation of a Mexican type sauce with the high amylose starch and high amylose/rice starch products as texture agents.

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Table 4 Mexican sauce formulation

Ingredients	Control	Sample 1	Sample 2
	(%)	(%)	(%)
Water	51.8	51.8	51.8
Sunflower oil	15.0	15.0	15.0
Starch	2.5	-	-
Aroma, spices, tomato	30.7	30.7	30.7
HA-starch product	-	2.5	-
HA-starch/rice flour product (1:1)	-	-	2.5

Sample 1 : prepared with the high amylose starch product

Sample 2 : prepared with the high amylose-starch/rice
flour product.

Sensory evaluation of the products (round table tasting) :
Sample 1 and 2 had a desired soft, pourable texture. The
control sauce has a more solid, gel-like structure. The
use of μ -particulate starch preparation described in this
invention, especially the high amylose starch product
(sample 1) favoured the typical sauce taste.

Example 8 : French salad dressing

This example illustrates the preparation of a salad dress-
ing using the high amylose starch product as a fat
replacer.

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Table 5 : French salad Dressing Formulation

Ingredients	Control	Sample
	(%)	(%)
Sunflower oil	38.3	25.5
Water	21.1	27.2
Vinegar, mustard, aroma, spices, hydrocolloids	40.6	44.8
HA-starch product	-	2.5
Calories (kcal)	400	295

The sample was prepared with the high amylose (HA)-starch product.

The hydrocolloid was slurried in a portion of the oil and mixed with water in a Hobart mixer with a whip attachment for 3 min. The blend of all dry ingredients was added to the mixture for another 3 min. Then, the remaining oil and the vinegar were added separately with mixing after each addition.

Sensory evaluation (round table tasting) :

The sample containing the HA-starch product had a pourable texture and was acceptable in appearance, mouthfeel and creaminess.

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112**WHAT IS CLAIMED IS:**

1. A food grade texture agent in the form of thermally stabilized swelling resistant and non crystalline particles of high amylose starch, which present a gelled soft structure, in which the amylose content of the starch is between 40 to 70%, and in which 90% of the particles have a diameter in the range of 5 to 30 microns.
2. Texture agent according to claim 1, in which the high amylose starch particles are mixed with a cereal flour.
- 10 3. Texture agent according to claim 2, which comprises a ratio of 1:1 to 1:4 of high amylose starch and of rice flour.
4. Texture agent according to claim 2, which comprises a ratio of 1:1 of high amylose starch and of rice flour.
5. Texture agent according to any one of claims 1 to 4, in the form of a dehydrated powdered product, which is reconstitutable in water.
6. Texture agent according to any one of claims 1 to 4, in the form of a tridimensional particle gel network at a concentration of about 10 to 30 %wt in an aqueous phase.
7. Use of the texture agent according to any one of claims 1 to 6 in food
20 preparations as fat replacer.
8. Process for preparing food grade texture agent according to claim 1, comprising the steps of suspending the high amylose starch in water, heating the slurry thus obtained to about 80-100°C, under continuous controlled stirring without shearing but sufficient to avoid particle aggregation and so as to form the aimed particle gel product, and cooling said product.

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9. Process according to claim 8, wherein the step of heating the slurry thus obtained is carried out to about 90°-100°C.
10. Process according to claim 8 or 9, which is carried out under a pressure of about 0.3 bar and at about 95°C.
11. Process according to any one of claims 8 to 10, which further comprises the steps of a second heating to about 40°-80°C and a second cooling.
12. Process according to claim 8, for the preparation of a texture agent according to claim 2, in which the high amylase starch is formerly mixed with a cereal flour, the first heating step being between about 80° and 100°C.
- 10 13. Process according to claim 12, wherein said cereal flour consists of rice flour.
14. Process according to any one of claims 8 to 13, in which amylolytic enzymes are added to the starting high amylase starch at a concentration of 0.003 to 1.5 %wt, and in which a third heating step is carried out at 90°-125°C to inactivate said enzymes.
15. Process according to any one of claims 8 to 14, in which the product obtained is subsequently dried and put in a dehydrated powdered form.
16. Process according to claim 15, in which maltodextrin is added to the treated particulate product prior to drying, and at a ratio of 1:0.5 to 1:1 high amylose starch-maltodextrin.
- 20 17. Process according to claim 15, in which maltodextrin is added to the treated particulate product prior to spray-drying, and at a ratio of 1:0.5 to 1:1 high amylase starch-maltodextrin.

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⑦① Demandeur: **SOCIETE DES PRODUITS NESTLE
S.A.
Case postale 353
CH-1800 Vevey(CH)**

⑦② Inventeur: **Conde-Petit, Béatrice
Institut für Lebensmittelwissenschaft,
ETH-Zentrum
CH-8092 Zürich(CH)
Inventeur: Escher, Felix
Institut für Lebensmittelwissenschaft,
ETH-Zentrum
CH-8092 Zürich(CH)**

⑤④ **Gel obtenu par complexation d'amidon par un émulsifiant.**

⑤⑦ Gel, notamment gel alimentaire, à faible concentration en amidon, présentant une texture remarquable, notamment une texture mi-solide courte, due à une augmentation de son élasticité par rapport à sa viscosité grâce à une complexation par inclusion de molécules d'émulsifiant dans des molécules d'amylose libérées de l'amidon.

EP 0 519 104 A1

La présente invention a pour objet un procédé de préparation d'un gel, notamment d'un gel alimentaire, ainsi que le gel obtenu par ce procédé.

On connaît divers procédés de modification d'amidons faisant intervenir leur complexation avec un émulsifiant dans le but d'améliorer leur dispersibilité ou leur pouvoir épaississant, par exemple.

5 C'est ainsi que US 4491483 (Dudacek et al.) propose un amidon facilement dispersable dans l'eau bouillante, obtenu par traitement d'un amidon natif à 50-120 °C en présence de 10-40% d'eau et d'au moins 0,25%, sur poids d'amidon, d'émulsifiant, et séchage, les conditions précises de ce traitement à l'humidité et à la chaleur étant choisies de manière à ne pas gélatiniser l'amidon. L'effet d'un tel traitement est d'élever la température de gélatinisation de l'amidon et d'éviter ainsi la formation de grumeaux lorsqu'on
10 le disperse dans l'eau bouillante.

FR 2629684 (INRA) propose un produit amylicé facilement dispersable dans l'eau aussi bien froide que chaude ou bouillante, obtenu par traitement aux microondes d'un milieu contenant un amidon natif, 30-50% d'eau et éventuellement 3% au plus, sur poids d'amidon, d'un agent complexant l'amylose, granulation de la pâte ainsi obtenue et séchage. Le traitement aux microondes est conduit à 50-98 °C durant 30 s - 15 min
15 jusqu'à gélatinisation d'au moins 50% de l'amidon. La matière amylicée ainsi obtenue peut être utilisée pour ses propriétés liantes dans la confection de plats cuisinés, charcuterie et sauces, par exemple.

EP 11479 (General Foods) propose un procédé de préparation d'un amidon modifié pré-gélatinisé utilisable pour la confection de puddings instantanés, dans lequel on ajoute du stearoyl-lactyl-2-lactate de sodium ou calcium et/ou une combinaison d'une protéine et d'un émulsifiant à une dispersion aqueuse d'amidon natif, et dans lequel soit on chauffe et sèche directement sur rouleaux une dispersion à 20-40%
20 de matière sèche, soit on chauffe avec un échangeur de chaleur à surface raclée une dispersion à moins de 10%, par exemple 7,2% de matière sèche et l'on sèche par pulvérisation.

Dans la variante du procédé selon EP 11479 où l'on utilise un séchoir à rouleaux, on chauffe les rouleaux avec une vapeur à 3-11 bar et on les fait tourner à quelques tours/min. Dans la variante où l'on
25 utilise un échangeur de chaleur à surface raclée, la dispersion est de préférence préchauffée juste en-dessous de la température de gélatinisation de l'amidon, par exemple à 65-70 °C pour le tapioca, pour augmenter cette température de gélatinisation, puis chauffée à 80-90 °C durant un temps suffisant pour gélatiniser complètement l'amidon.

La forme de réalisation du procédé selon EP 11479 dans laquelle on n'ajoute que du stearoyl-lactyl-2-lactate de sodium ou calcium permet d'obtenir un amidon modifié pré-gélatinisé qui exerce le même effet
30 épaississant qu'un amidon pré-gélatinisé non modifié. La modification proprement dite donne au pudding reconstitué une texture plus douce et plus crémeuse ainsi qu'un aspect plus brillant.

On connaît également diverses poudres pour gels alimentaires du type desserts instantanés ou à cuire, qui comprennent de l'amidon, en tant qu'agent épaississant, et un émulsifiant, en tant qu'agent lissant la
35 texture du dessert reconstitué.

C'est ainsi que US 3917875 (Gardiner) décrit une poudre pour dessert instantané du type yogourt, qui comprend du sucre, de la gélatine, un agent stabilisant tel qu'une gomme, un acide alimentaire, de l'amidon pré-gélatinisé et, optionnellement, un émulsifiant et/ou des agents colorant et aromatisant.

De même, US 4262031 (Carpenter et al.) décrit une poudre pour pudding à cuire, qui comprend du
40 sucre, de l'amidon non gélatinisé, notamment de l'amidon natif de maïs, de la poudre de cacao fortement alcalinisée, un agent acidifiant et, optionnellement, un émulsifiant et/ou un agent stabilisant tel qu'une gomme.

La présente invention a pour but de proposer un gel, notamment un gel alimentaire, à faible concentration en amidon complexé avec un émulsifiant, qui présente une texture particulièrement courte,
45 autrement dit qui se distingue par son élasticité, par opposition à sa viscosité.

La présente invention a également pour but de proposer un procédé de préparation d'un tel gel à partir d'une solution aqueuse à faible concentration en amidon.

A cet effet, le gel selon la présente invention contient de l'amidon présentant une teneur notable en amylose complexé avec un émulsifiant susceptible de complexer l'amylose, et il présente un module
50 conservatif G' de 5-50 Nm^{-2} ainsi qu'un module dissipatif G'' de 1-10 Nm^{-2} .

De même, dans le procédé de préparation d'un tel gel selon la présente invention, on prépare un mélange aqueux contenant tous les ingrédients devant entrer dans la composition du gel, dont ledit émulsifiant en dispersion et ledit amidon gélatinisé dans des conditions permettant de libérer une quantité
55 utile d'amylose, on complexe à chaud cette amylose avec l'émulsifiant, et l'on fait prendre le mélange par refroidissement.

On a constaté qu'il était effectivement possible de préparer ainsi des gels à faible concentration en amidon présentant une texture remarquable due à une augmentation de leur élasticité par rapport à leur viscosité grâce à une complexation avec un émulsifiant de l'amylose libérée.

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On a constaté en particulier que la formation de ces gels est due à une complexation par inclusion des molécules d'émulsifiant dans des molécules d'amylose qui prennent une configuration hélicoïdale. Ce type de complexation est décrit par M. A. Rutschmann, par exemple, dans sa dissertation publiée en 1987 à L'Ecole Polytechnique Fédérale de Zurich sous le No 8413.

5 Dans le présent exposé, la texture des gels est définie par l'intermédiaire des paramètres "module conservatif" G' , caractérisant l'élasticité, et "module dissipatif" G'' , caractérisant la viscosité. Ces paramètres sont déterminés en régime harmonique. L'échantillon est soumis à une sollicitation ou déformation sinusoïdale à une fréquence déterminée en fonction du temps. On mesure la contrainte de cisaillement correspondante, elle-même sinusoïdale mais présentant un décalage de phase compris entre les extrêmes
10 zéro (texture purement élastique) et $\pi/2$ (texture purement visqueuse). Un décalage de phase intermédiaire présente une composante élastique, à savoir le module conservatif G' , et une composante visqueuse, à savoir le module dissipatif G'' . Dans le cadre du présent exposé, ces modules sont déterminés à l'aide d'un rhéomètre à tension constante utilisant un dispositif de mesure formé d'un cône tournant sur une plaque, cône et plaque ayant un diamètre de 6 cm et l'angle entre cône et plaque étant de 2° . Les mesures sont
15 faites à 25°C , à une fréquence d'oscillation du cône autour de son axe de 2 Hz, sous un couple situé dans un domaine de viscoélasticité linéaire compris entre environ 0,01 et 0,1 Nm.

Un pouvoir de liaison de l'iode est déterminé par titration ampérométrique de l'iode selon la méthode décrite par R. Wyler dans sa dissertation publiée en 1979 à l'Ecole Polytechnique Fédérale de Zurich sous le No 6514.

20 Les mesures sont faites à une tension et à un courant de polarisation de 140 mV et 2mA, à température ambiante, sur des échantillons de solution de titration iode/potassium 0,01 N de 15 ml, et à un débit goutte à goutte de 0,4 ml/min. Le pouvoir de liaison de l'iode est défini comme le quotient de la quantité d'iode lié sur la quantité d'amidon totale multiplié par cent.

Un degré de complexation est défini comme le quotient de la différence entre le pouvoir de liaison de l'iode de l'amidon et le pouvoir de liaison de l'iode du complexe sur le pouvoir de liaison de l'iode de l'amidon multiplié par cent.

L'expression "à faible concentration en amidon" signifie présentant une faible teneur en amidon, à savoir une teneur de environ un à quelques % en poids d'amidon. Un amidon natif présentant généralement une certaine teneur en eau, de environ 7-15% par exemple, on peut préciser que des "% en poids
30 d'amidon" sont à comprendre ici comme des % en poids de matière sèche d'amidon.

C'est ainsi que le gel selon la présente invention contient de préférence 1-5% en poids dudit amidon et 1-8%, sur poids d'amidon, dudit émulsifiant, par exemple.

Ledit amidon doit présenter une teneur notable en amylose. Ceci signifie qu'un amidon connu pour être composé pratiquement exclusivement d'amylopectine, comme l'amidon connu sous la dénomination anglaise de "waxy maize" (amidon cireux, 1% d'amylose), par exemple, ne conviendrait pas. Mais ceci ne signifie pas qu'il faille choisir un amidon exceptionnellement riche en amylose, tel que l'amidon connu sous la dénomination anglaise d'"amylomaize" (amylomaïs, 50-70% d'amylose), par exemple, qui pourrait ne pas convenir non plus.

Des amidons particulièrement recommandables dans le cadre de la présente invention sont les
40 amidons de pommes de terre, tapioca, maïs ordinaire et/ou blé, qui présentent une teneur dite notable en amylose comprise entre environ 15-30% en poids.

Ledit émulsifiant doit être susceptible de former un complexe avec l'amylose. C'est ainsi que la lécithine, par exemple, ne convient pas. Par contre, le glycerol monostearate, le calcium stearoyl-lactyl-2-lactate, le sodium stearoyl-lactyl-2-lactate, le polyoxyethylene-sorbitane-monostearate et/ou le polyéthylène glycol-monolaurate, par exemple, conviennent particulièrement bien.

La présente invention permet de proposer des gels à l'intention de diverses branches de l'industrie intéressées par ce type de produits, en particulier l'industrie alimentaire, l'industrie cosmétique et l'industrie des vernis et peintures, par exemple.

Dans une forme de réalisation préférée de la présente invention, ledit gel est un gel alimentaire et il
50 peut notamment contenir, en plus dudit amidon complexé, des ingrédients traditionnels dans des desserts du type pudding, tels que des solides du lait, du saccharose et des matières et/ou agents aromatisants et/ou colorant, par exemple.

Pour mettre en oeuvre le procédé selon la présente invention, on prépare donc une solution aqueuse contenant tous les ingrédients devant entrer dans la composition du gel, à savoir ledit amidon, ledit émulsifiant en dispersion et d'autres ingrédients complémentaires éventuels, tels que ceux cités ci-dessus
55 pour la forme de réalisation particulière du type pudding, par exemple.

On peut préparer ladite solution en y ajoutant l'amidon sous forme native, pré-gélatinisée, ou pré-traitée à la chaleur et à l'humidité, par exemple. On peut noter à ce propos que les conditions dans lesquelles on

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gélatinise l'amidon peuvent être d'autant plus critiques que la concentration en amidon dudit mélange aqueux est plus faible.

Au-dessous de environ 2% en poids, par exemple, il est recommandé de gélatiniser l'amidon dans des conditions permettant de préserver l'intégrité de ses granules tout en laissant sortir une quantité utile d'amylose, autrement dit une quantité adéquate qui permette d'obtenir un gel présentant la texture recherchée. Pour ce faire, on peut gélatiniser l'amidon à 90-98°C durant 2-30 min, tout en brassant délicatement, par exemple. Si l'on gélatinise à moins de 90°C, on court le risque qu'une quantité trop faible d'amylose sorte des granules d'amidon. Si l'on gélatinise à plus de 98°C, on court le risque de faire éclater les granules.

Si au contraire, on gélatinise l'amidon dans des conditions où la probabilité est grande que pratiquement tous les granules éclatent, il est recommandé de prévoir une concentration en amidon dudit mélange aqueux de environ 3% en poids au moins. Une telle probabilité existe notamment lorsqu'on gélatinise l'amidon dans des conditions équivalant à un traitement de stérilisation, à des températures pouvant s'élever jusqu'à environ 125°C, par exemple.

En d'autres termes, lorsque la température de gélatinisation s'élève au-dessus de 98°C, il est recommandé de compenser le fait que des granules puissent éclater en augmentant la concentration en amidon dudit mélange aqueux au-delà de 2%, pour arriver à des concentrations de au moins environ 3% dans des conditions de stérilisation, par exemple.

Quoi qu'il en soit, on gélatinise de préférence l'amidon dans des conditions permettant de libérer une quantité d'amylose telle qu'il présente un pouvoir de liaison de l'iode de environ 3,3-4,7%.

On ajoute l'émulsifiant audit mélange aqueux de manière qu'il s'y trouve en dispersion. Ceci est nécessaire pour que l'émulsifiant soit disponible pour complexer l'amidon, ou plus précisément l'amylose libérée. De préférence, on ajoute l'émulsifiant au mélange aqueux de manière à pouvoir obtenir un degré de complexation de l'amidon avec l'émulsifiant de environ 90-100%.

Pour ce faire, on peut soit mettre au préalable l'émulsifiant en dispersion dans un peu d'eau et ajouter la dispersion au mélange, soit mettre directement l'émulsifiant en dispersion dans le mélange, à un pH et à une température adéquate, par exemple. Les conditions de pH et de température adéquates pour mettre un émulsifiant en dispersion aqueuse sont caractéristiques de chaque émulsifiant et sont soit connues de, soit déterminables par l'homme du métier. On peut rappeler ici que le calcium stearoyl-lactyl-2-lactate se laisse mettre en dispersion aqueuse à pH 6-12 et 45-55°C, le glycerol monostearate à pH 6-7 et 66-68°C, et le polyoxyethylene-sorbitane-monostearate à pH 5-12 et 25-80°C, par exemple.

On peut ajouter l'émulsifiant audit mélange, de la manière indiquée ci-dessus, avant, pendant ou après l'opération de gélatinisation de l'amidon. On peut même ajouter l'émulsifiant à l'amidon, notamment en enrober un amidon pré-gélatinisé ou non, et ajouter le tout audit mélange.

On complexe à chaud ladite amylose sortie des granules avec ledit émulsifiant. Comme évoqué ci-dessus, on complexe de préférence l'amylose avec l'émulsifiant de manière que l'amidon présente un degré de complexation de environ 90-100%. A cet effet, on peut réaliser cette complexation à 70-125°C durant 15 s à 30 min, par exemple.

Les exemples ci-après sont présentés à titre d'illustration du gel et de son procédé de préparation selon la présente invention. Les pourcentages et parties y sont donnés en poids sauf indication contraire.

Exemple 1

On prépare un mélange aqueux contenant les ingrédients suivants dans les proportions indiquées en %:

lait entier	90,46
saccharose vanillé	6,67
amidon de pomme de terre natif à 85% de matière sèche et 23% d'amylose	2,67
colorant jaune alimentaire	0,13
calcium stearoyl-lactyl-2-lactate	0,07

L'émulsifiant a été mis en dispersion au préalable dans une partie du lait à pH 6,0 et à 45°C, puis ajouté au mélange.

On porte la température du mélange à 95°C tout en brassant. On maintient la température à 95°C durant 20 -30 min tout en brassant.

Au cours de cette opération, on réalise simultanément la gélatinisation de l'amidon et la complexation

de l'amylose libérée. Les conditions de cette opération permettent d'une part de libérer une quantité d'amylose telle que l'amidon présente un pouvoir de liaison de l'iode de 3,63%, et d'autre part de complexer cette amylose avec l'émulsifiant de manière que l'amidon présente un degré de complexation de 100%.

- 5 On fait prendre le mélange par refroidissement à 5 °C, sans brasser. Le gel alimentaire, autrement dit le pudding à la vanille obtenu présente un module conservatif G' de 22 Nm^{-2} , un module dissipatif G'' de 5 Nm^{-2} et un pH de 6,5. Il se distingue par une texture en bouche à la fois fondante et croquante mais absolument pas collante, autrement dit une texture mi-solide courte.

- 10 A titre de comparaison, un pudding à la vanille préparé de manière semblable mais sans addition d'émulsifiant présente une texture longue et fluide, un module conservatif G' de 3,2 Nm^{-2} et un module dissipatif G'' de 3,4 Nm^{-2} .

Exemple 2

- 15 On prépare un mélange aqueux contenant les ingrédients suivants dans les proportions indiquées en %:

20	eau	80,22
	crème à 35% de matière grasse	7,89
	saccharose	6,67
	amidon de pomme de terre à 88,5% de matière sèche et 23% d'amylose, traité à la chaleur et à l'humidité*	2,76
	lait écrémé en poudre	2,10
25	glycerol monostearate	0,05
	calcium stearyl-lactyl-2-lactate	0,05
	colorant jaune alimentaire	0,13
	extrait de vanille	0,13

- 30 * l'amidon a été humidifié à 20% d'eau, traité durant 4 h à 95 °C dans un récipient fermé, séché à l'air et broyé.

Les émulsifiants ont été mis en dispersion au préalable séparément, dans une partie d'eau à pH à 6,5 et 67 °C pour le glycerol monostearate et dans une partie d'eau à pH 6,0 et 45 °C pour le calcium stearyl-lactyl-2-lactate. Ils ont été ensuite ajoutés au mélange.

- 35 On met le mélange en boîtes de fer blanc laquées de 0,5 litre que l'on scelle. On place les boîtes dans une autoclave tournant à 0,2 tours/min et on les y laisse 30 min à 121 °C, la température de la solution montant de 25 à 121 °C au cours des 10 premières minutes.

- 40 Au cours de cette opération, on réalise simultanément la gélatinisation de l'amidon et la complexation de l'amylose libérée. Les conditions de cette opération permettent d'une part de libérer une quantité d'amylose telle que l'amidon présente un pouvoir de liaison de l'iode de 4,32%, et d'autre part de complexer cette amylose avec l'émulsifiant de manière que l'amidon présente un degré de complexation de 100%.

- 45 On fait prendre le mélange par refroidissement à l'eau froide dans l'autoclave jusqu'à 25 °C. Cette opération prend environ 30 min. On stoppe la rotation de l'autoclave 10 min après le début du refroidissement.

Le gel alimentaire, autrement dit le pudding à la vanille stérilisé obtenu présente un module conservatif G' de 20 Nm^{-2} , un module dissipatif G'' de 5 Nm^{-2} et un pH de 6,5. Il se distingue par une texture mi-solide courte.

- 50 A titre de comparaison, un pudding à la vanille stérilisé de manière semblable mais sans addition d'émulsifiant présente une texture longue et fluide, un module conservatif G' de 1,5 Nm^{-2} et un module dissipatif G'' de 1,6 Nm^{-2} .

Exemple 3

- 55 On prépare un mélange aqueux contenant les ingrédients suivants dans les proportions indiquées en %:

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amidon de pomme de terre pré-gélatinisé du commerce, à 93% de matière sèche et 23% d'amylose	2,88
calcium stéaroyl-lactyl-2-lactate enrobant l'amidon*	0,12
saccharose	6,0
saccharose vanillé	2,0
poudre de cacao	4,0
lait écrémé en poudre	10,0
eau	75,0

* l'amidon pré-gélatinisé a été enrobé par pulvérisation d'une solution alcoolique de l'émulsifiant, puis séché à l'air à 40 °C.

Les conditions de gélatinisation préalable de l'amidon ont permis de libérer une quantité d'amylose telle qu'il présente un pouvoir de liaison de l'iode de 4,65%.

Pour préparer ledit mélange, les ingrédients secs sont dispersés délicatement dans l'eau. On porte ensuite le mélange à 98 °C tout en brassant. On maintient la température à 98 °C durant 5 min tout en brassant délicatement.

Au cours de cette opération, on complexe l'amylose de manière telle que l'amidon présente un degré de complexation de 100%.

On fait prendre le mélange par refroidissement à 5 °C, sans brasser. Le gel alimentaire, autrement dit le pudding au chocolat obtenu présente un module conservatif G' de 30 Nm^{-2} , un module dissipatif G'' de 8 Nm^{-2} , et un pH de 6,6. Il se distingue par une texture mi-solide particulièrement courte.

A titre de comparaison, un pudding au chocolat obtenu de manière semblable mais sans addition d'émulsifiant présente une texture longue et moins ferme, un module conservatif G' de 1,4 Nm^{-2} et un module dissipatif G'' de 3,1 Nm^{-2} .

Exemple 4

On prépare un mélange aqueux contenant les ingrédients suivants dans les proportions indiquées en %:

amidon de tapioca à 88,7% de matière sèche et 18% d'amylose	3,38
polyoxyéthylène-sorbitane-monostéarate	0,21
cyclamate	0,082
saccharine	0,008
acide citrique	0,30
colorant jaune alimentaire	0,15
eau	95,72

Pour préparer ce mélange, on met l'amidon en suspension dans l'eau et on le gélatinise durant 30 min à 95 °C tout en brassant avec précaution. On obtient une solution d'amidon dans laquelle la quantité d'amylose libérée des granules est telle qu'il présente un pouvoir de liaison de l'iode de 4,15%.

On ajoute le reste des ingrédients du mélange à la solution d'amidon à 95 °C et l'on brasse le mélange énergiquement durant 15 s. On complexe ainsi l'amylose libérée avec l'émulsifiant, de sorte que l'amidon présente un degré de complexation de 100%.

On fait prendre le mélange par refroidissement à 25 °C, sans brasser. Le gel au citron obtenu présente un module conservatif G' de 12 Nm^{-2} , un module dissipatif G'' de 3 Nm^{-2} , et un pH de 2,5. Il se distingue par une texture de gel courte bien typée.

A titre de comparaison, un produit préparé de manière semblable mais sans addition d'émulsifiant ne prend pas, reste liquide et ne présente pas une texture de gel. Son module conservatif G' est de 0,8 Nm^{-2} et son module dissipatif G'' est de 1,2 Nm^{-2} .

Revendications

1. Gel, caractérisé par le fait qu'il contient de l'amidon présentant une teneur notable en amylose complexé avec un émulsifiant susceptible de former un complexe avec l'amylose et il présente un module conservatif G' de 5-50 Nm^{-2} ainsi qu'un module dissipatif G'' de 1-10 Nm^{-2} .

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2. Gel selon la revendication 1, dans lequel ledit amidon est un amidon de pomme de terre, tapioca, maïs et/ou blé, et ledit émulsifiant est le glycerol monostearate, le calcium stearoyl-lactyl-2-lactate, le sodium stearoyl-lactyl-2-lactate, le polyoxyéthylène-sorbitane-monostearate et/ou le polyéthylène glycol-monolaurate.
- 5 3. Gel selon la revendication 1, contenant 1-5% en poids dudit amidon et 1-8%, sur poids d'amidon, dudit émulsifiant.
- 10 4. Gel, alimentaire, selon la revendication 1, contenant, en plus dudit amidon complexé, des solides du lait, du saccharose et des matières et/ou agents aromatisant et/ou colorant.
- 15 5. Procédé de préparation d'un gel selon l'une des revendications 1-4, dans lequel on prépare un mélange aqueux contenant tous les ingrédients devant entrer dans la composition du gel, dont ledit émulsifiant en dispersion et ledit amidon gélatinisé dans des conditions permettant de libérer une quantité utile d'amylose, on complexe à chaud cette amylose avec l'émulsifiant, et l'on fait prendre le mélange par refroidissement.
- 20 6. Procédé selon la revendication 5, dans lequel on prépare ledit mélange en y ajoutant l'amidon sous forme native, prégélatinisée, ou prétraitée à la chaleur et à l'humidité.
7. Procédé selon la revendication 5, dans lequel on gélatinise l'amidon dans des conditions permettant de libérer une quantité d'amylose telle qu'il présente un pouvoir de liaison de l'iode de 3,3-4,7%.
- 25 8. Procédé selon la revendication 5, dans lequel on gélatinise l'amidon à 90-125 °C durant 2-30 min.
9. Procédé selon la revendication 5, dans lequel on complexe ladite amylose libérée avec l'émulsifiant de manière que l'amidon présente un degré de complexation de 90-100%.
- 30 10. Procédé selon la revendication 5, dans lequel on complexe l'amylose avec l'émulsifiant à 70-125 °C durant 15 s - 30 min.

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RAPPORT DE RECHERCHE EUROPEENNE

Numero de la demande

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DOCUMENTS CONSIDERES COMME PERTINENTS			
Catégorie	Citation du document avec indication, en cas de besoin, des parties pertinentes	Revendication concernée	CLASSEMENT DE LA DEMANDE (Int. Cl.5)
A	DE-A-2 159 433 (GENERAL FOODS CORP.) * revendication 1 * * page 3, alinéa 4 * * page 4, alinéa 3 - page 5, alinéa 1 * ---	1-10	A23L1/0522 A23L1/187 A23L1/035
A	FR-A-1 446 263 (AMYLO CHEMIE) * résumé * * page 1, colonne de gauche, alinéa 2 * * page 1, colonne de droite, alinéa 5 - page 3, colonne de gauche, alinéa 4 * * exemple * ---	1-10	
D,A	EP-A-0 011 479 (GENERAL FOODS CORP.) * revendications 1,6,8,9,15 * * page 2, ligne 24 - page 6, ligne 8 * * page 9, ligne 22 - page 10, ligne 4 * * page 11, ligne 6 - ligne 11 * ---	1-10	
A	FOOD SCIENCE AND TECHNOLOGY ABSTRACTS; 1979; AN 79-12-M1341, INTERNATIONAL FOOD INFORMATION SERVICE; C.TU: 'The interaction between surfactants and major flour components during breadmaking' & Dissertation abstracts international, Vol.39, No.1, pp. 151-152, 1978 * résumé * ---	1-10	DOMAINES TECHNIQUES RECHERCHES (Int. Cl.5) A23L A23C A23P
A	EP-A-0 118 753 (S.C. JOHNSON & SON INC.) * revendications 1-10 * * page 2, ligne 6 - page 5, ligne 12 * * page 6, ligne 5 - ligne 9 * * exemple 10 * ---	1-10	
D,A	EP-A-0 076 381 (CPC INTERNATIONAL INC.) * revendications 1,4,6,10-12,15,16,18 * * page 6, alinéa 2 - page 7, alinéa 1 * * page 9, alinéa 3 - page 11, alinéa 1 * & US-A-4 491 483 ---	1-10	
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Le présent rapport a été établi pour toutes les revendications			
Lieu de la recherche LA HAYE		Date d'achèvement de la recherche 29 JANVIER 1992	Examinateur
CATEGORIE DES DOCUMENTS CITES X : particulièrement pertinent à lui seul Y : particulièrement pertinent en combinaison avec un autre document de la même catégorie A : arrière-plan technologique O : divulgation non-écrite P : document intercalaire T : théorie ou principe à la base de l'invention E : document de brevet antérieur, mais publié à la date de dépôt ou après cette date D : cité dans la demande L : cité pour d'autres raisons & : membre de la même famille, document correspondant			

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DOCUMENTS CONSIDERES COMME PERTINENTS			
Catégorie	Citation du document avec indication, en cas de besoin, des parties pertinentes	Revendication concernée	CLASSEMENT DE LA DEMANDE (Int. Cl.5)
A	US-A-2 749 244 (B.M. WINNER) * revendications 1,2 * * colonne 1, ligne 42 - colonne 2, ligne 19 * * page 3, ligne 27 - ligne 42 * -----	1-10	
			DOMAINES TECHNIQUES RECHERCHES (Int. Cl.5)
Le présent rapport a été établi pour toutes les revendications			
Lieu de la recherche LA HAYE		Date d'achèvement de la recherche 29 JANVIER 1992	Examinateur
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EP-O FORM 1500 (04.92) (FR-EN)

Poder de Abogado

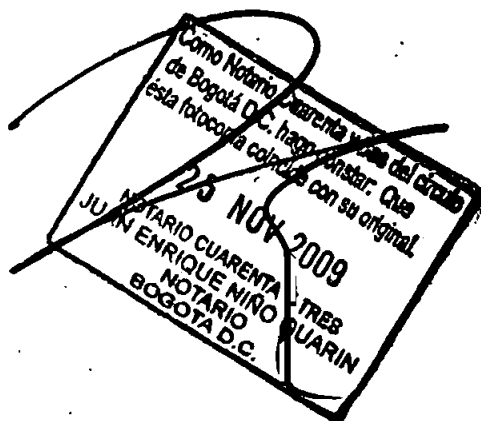
La abajo firmada, **QUALA S.A.**, sociedad organizada y existente de conformidad con las leyes de Colombia, domiciliada en Carrera 68D No. 39F-51 Sur, Bogotá D.C., Colombia, otorga a **ANDREA TOBOS MATEUS**, tpa 148648, de la firma Martínez y Tobos S.A.S., domiciliada en la Avenida 19 No. 118-30 oficina 209, Bogotá D.C., Colombia, poder amplio y suficiente para que nos represente ante la Superintendencia de Industria y Comercio, en todo lo concerniente a los siguientes asuntos:

a) Presentación y tramitación de oposiciones, a cuyo efecto la faculta para presentar solicitudes, peticiones y demandas, interponer recursos, reclamos, pagar impuestos y tasas, recibir, transigir y desistir, incluyendo facultades para entrar en acuerdos amigables, conciliaciones y transacciones, y en general, a dar ante las autoridades competentes todos los pasos necesarios para la presentación y tramitación de oposiciones.

Asimismo, se concede a la mencionada mandataria poder suficiente para recibir notificaciones a nombre de la compañía, otorgar poderes a quienes vayan a representar a la compañía judicial y extrajudicialmente, responder en juicio a todas las reclamaciones o demandas que por motivo de las oposiciones se presenten y hacer cuanto fuere necesario ante las autoridades administrativas o judiciales de cualquier orden para el cumplimiento de este mandato, dándoles igualmente facultad para sustituir el presente poder y en caso necesario, revocar dichas sustituciones.

Dado y firmado hoy noviembre de 2009

En Bogota
Por EDGAR IVAN AREVALO
REPRESENTANTE LEGAL
QUALA S.A
C.C 79423566



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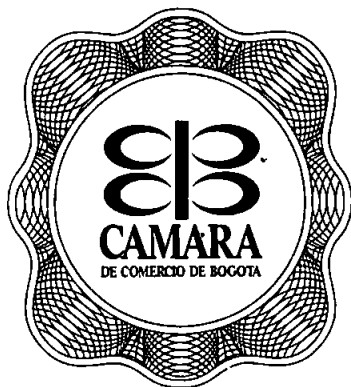
Edgar Ivan Arcuato
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Como Notario Cuarenta y tres del círculo
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NOTARIO CUARENTA Y TRES
JUAN ENRIQUE NINO GUARIN
BOGOTA D.C.



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CAMARA DE COMERCIO DE BOGOTA

SEDE CEDRITOS

25 DE NOVIEMBRE DE 2009

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PAGINA: 1 de 4

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CERTIFICADO DE EXISTENCIA Y REPRESENTACION LEGAL O INSCRIPCION DE DOCUMENTOS

LA CAMARA DE COMERCIO DE BOGOTA, CON FUNDAMENTO EN LAS MATRICULAS E INSCRIPCIONES DEL REGISTRO MERCANTIL

CERTIFICA:

NOMBRE : QUALA S A

N.I.T. : 860074450-9

DOMICILIO : BOGOTA D.C.

CERTIFICA:

MATRICULA NO: 00130709 DEL 13 DE FEBRERO DE 1980

CERTIFICA:

DIRECCION DE NOTIFICACION JUDICIAL : CR 68 D NO. 39F-51 SUR

MUNICIPIO : BOGOTA D.C.

EMAIL DE NOTIFICACION JUDICIAL : quala@quala.com.co

DIRECCION COMERCIAL : CR 68 D NO. 39F-51 SUR

MUNICIPIO : BOGOTA D.C.

EMAIL COMERCIAL : quala@quala.com.co

CERTIFICA:

CONSTITUCION: ESCRITURA PUBLICA NO.226, NOTARIA 6 DE BOGOTA, EL 24 DE ENERO DE 1.980, INSCRITA EL 13 DE FEBRERO DE 1.980, BAJO EL,NO. 81364 DEL LIBRO IX SE CONSTITUYO LA SOCIEDAD LIMITADA DENOMINADA "QUALA LIMITADA"

CERTIFICA:

QUE POR ESCRITURA NO. 5387 OTORGADA EN LA NOTARIA 18 DE BOGOTA EL 26 DE DICIEMBRE DE 1.984, ACLARADA POR LA ESCRITURA PUBLICA NO. - 0390 OTORGADA EN LA MISMA NOTARIA EL 14 DE FEBRERO DE 1.985, INSCRITAS EN ESTA CAMARA DE COMERCIO EL 28 DE DICIEMBRE DE 1.984, Y EL 27 DE MAYO DE 1.985 BAJO LOS NUMEROS 163.355 Y 170.593 DEL LIBRO IX, LA SOCIEDAD SE TRANSFORMO DE LIMITADA EN ANONIMA BAJO EL NOMBRE DE " QUALA S.A. "

CERTIFICA:

QUE POR ESCRITURA PUBLICA NO. 5465 DEL 29 DE OCTUBRE DE 2001 DE LA NOTARIA SEXTA DE BOGOTA D.C., INSCRITA EL 07 DE NOVIEMBRE DE 2001 BAJO EL NO. 801318 DEL LIBRO IX, LA SOCIEDAD DE LA REFERENCIA SE FUSIONO CON LA SOCIEDAD SOL NACIENTE S. A. ABSORVIENDOLA.

CERTIFICA:

REFORMAS:

ESCRITURAS NO.	FECHA	NOTARIA	INSCRIPCION
1832	29-IV-1.981	6 BTA	NO.100922 1-VI-1.981
3304	9-VII-1.981	6 BTA	NO.104268 14-VIII-81
7223	23-XII-1.983	6 BTA	NO.144964 30-XII- 83
10135	9-XII-1.986	27 BTA	NO.202426 15-XII- 86
10764	28-XII-1.989	5A.BTA.	NO.284544 17- I -1990
1040	25-II -1.993	18 STAFE BTA.	NO.408663 9-VI -1993

3490 19- X-1.995 32 STAFE BTA NO.514395 31- X-1995

82 14- I-1.992 18 STAFE BTA NO.520908 26-XII-1995

CERTIFICA:

REFORMAS:

E.P. NO.	FECHA	NOTARIA	CIUDAD	FECHA	NO.INSC.
0005465	2001/10/29	0006	BOGOTA D.C.	2001/11/07	00801318
0006035	2002/12/06	0006	BOGOTA D.C.	2003/01/30	00864109
0000508	2004/03/08	0032	BOGOTA D.C.	2004/03/16	00925005

CERTIFICA:

VIGENCIA: QUE LA SOCIEDAD NO SE HALLA DISUELTA. DURACION HASTA EL 26 DE DICIEMBRE DE 2064 .

CERTIFICA:

OBJETO SOCIAL: LA SOCIEDAD TENDRA COMO OBJETO SOCIAL PRINCIPAL, LA ELABORACION, PREPARACION, FABRICACION, PROCESAMIENTO, COMPRA VENTA, DISTRIBUCION Y EN GENERAL COMERCIALIZACION Y MERCADEO DE PRODUCTOS DE CONSUMO MASIVO, TALES COMO PRODUCTOS ALIMENTOS DE TODO TIPO, PRODUCTOS COSMETICOS, DETERGENTES, DENTRIFICOS (SIC). PERFUMES, ARTICULOS DE TOCADOR Y CUALQUIER OTRO TIPO DE PRODUCTOS DE CONSUMO DURABLE Y PERECEDERO DE COMERCIO LICITO. LA RELACION QUE SE HACE ES POR VIA ENUMERATIVA SOLAMENTE, PERO NO ES LIMITATIVA. EN DESARROLLO DE SU OBJETO SOCIAL LA EMPRESA TAMBIEN PODRA IMPORTAR Y EXPORTAR DICHOS PRODUCTOS, CELEBRAR CONTRATOS, ADQUIRIR, CONSERVAR, USAR, CEDER Y VENDER TODO TIPO DE BIEN OBJETO DE PROPIEDAD INDUSTRIAL E INTELECTUAL, ADQUIRIR, CONSERVAR Y GRAVAR TODO TIPO DE TITULOS VALORES Y DEMAS DOCUMENTOS CIVILES Y COMERCIALES, TOMAR INTERESES COMO ACCIONISTA, FUNDADOR O NO EN OTRAS COMPAÑIAS, FUSIONARSE CON ELLAS, INCORPORARSE EN ELLAS, TOMAR Y DAR DINERO EN MUTUO, CON GARANTIAS REALES O SIN ELLAS, EN GENERAL CELEBRAR LOS CONTRATOS DE CAMBIO Y CUENTA CORRIENTE EN TODAS SUS MODALIDADES Y LLEVAR A CABO TODO ACTO QUE SE RELACIONE CON EL OBJETO PRINCIPAL DE LA SOCIEDAD. LA RELACION QUE SE HACE ES POR VIA ENUMERATIVA SOLAMENTE, PERO NO ES LIMITATIVA.

CERTIFICA:

CAPITAL:

** CAPITAL AUTORIZADO **

VALOR	:	\$10,200,000,000.00
NO. DE ACCIONES	:	102,000,000.00
VALOR NOMINAL	:	\$100.00

** CAPITAL SUSCRITO **

VALOR	:	\$9,023,456,900.00
NO. DE ACCIONES	:	90,234,569.00
VALOR NOMINAL	:	\$100.00

** CAPITAL PAGADO **

VALOR	:	\$9,023,456,900.00
NO. DE ACCIONES	:	90,234,569.00
VALOR NOMINAL	:	\$100.00

CERTIFICA:

** JUNTA DIRECTIVA: PRINCIPAL (ES) **

QUE POR ACTA NO. 0000040 DE JUNTA DE SOCIOS DEL 31 DE MARZO DE 2008, INSCRITA EL 29 DE ABRIL DE 2008 BAJO EL NUMERO 01209902 DEL LIBRO IX, FUE (RON) NOMBRADO (S):

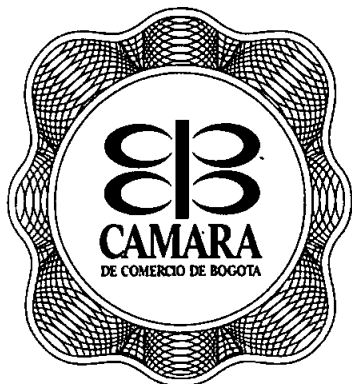
NOMBRE

IDENTIFICACION

PRIMER RENGLON

LEAL FERNANDEZ ANDRES

C.C. 000000080421193



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CAMARA DE COMERCIO DE BOGOTA

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SEGUNDO RENGLON

DE RHODES DUB MICHAEL JOHN LYON

C.E. 000000000106398

TERCER RENGLON

LEON DUB JORGE FERNANDO

C.C. 000001023163140

** JUNTA DIRECTIVA: SUPLENTE (S) **

QUE POR ACTA NO. 0000040 DE JUNTA DE SOCIOS DEL 31 DE MARZO DE 2008, INSCRITA EL 29 DE ABRIL DE 2008 BAJO EL NUMERO 01209902 DEL LIBRO IX, FUE (RON) NOMBRADO (S):

NOMBRE

IDENTIFICACION

PRIMER RENGLON

RODRIGUEZ BARRIOS MARIA ANGELICA

C.C. 000000039792657

SEGUNDO RENGLON

GIRALDO ARISTIZABAL JULIO CESAR

C.C. 000000019433795

TERCER RENGLON

LEON DUB JOSE PATRICIO MARCELO

C.C. 000001016912138

CERTIFICA:

REPRESENTACION LEGAL: LA SOCIEDAD TENDRA UN GERENTE Y TRES (3) SUPLENTE. EL PRIMER, SEGUNDO Y TERCER SUPLENTE, EN SU ORDEN REEMPLAZARAN AL GERENTE CON LAS MISMAS FACULTADES, ATRIBUCIONES Y LIMITACIONES DE ESTE, EN SUS FALTAS ABSOLUTAS, TEMPORALES O ACCIDENTALES, SIN NECESIDAD DE DECLARACION EXPRESA, EL SOLO EJERCICIO DE UNO CUALQUIERA DE LOS SUPLENTE ENTIENDE LA FALTA O AUSENCIA.

CERTIFICA:

** NOMBRAMIENTOS **

QUE POR ACTA NO. 0000092 DE JUNTA DIRECTIVA DEL 27 DE NOVIEMBRE DE 2002, INSCRITA EL 12 DE DICIEMBRE DE 2002 BAJO EL NUMERO 00857029 DEL LIBRO IX, FUE (RON) NOMBRADO (S):

NOMBRE

IDENTIFICACION

GERENTE

LEAL FERNANDEZ ANDRES

C.C. 000000080421193

SEGUNDO SUPLENTE DEL GERENTE

MEJIA FLOREZ MAURICIO

C.C. 000000019161894

QUE POR ACTA NO. 0000108 DE JUNTA DIRECTIVA DEL 20 DE FEBRERO DE 2004, INSCRITA EL 19 DE MARZO DE 2004 BAJO EL NUMERO 00925915 DEL LIBRO IX, FUE (RON) NOMBRADO (S):

NOMBRE

IDENTIFICACION

TERCER SUPLENTE DEL GERENTE

SERRANO FALLA MARIA VICTORIA

C.C. 000000039774985

QUE POR ACTA NO. 0000146 DE JUNTA DIRECTIVA DEL 10 DE NOVIEMBRE DE 2008, INSCRITA EL 13 DE NOVIEMBRE DE 2008 BAJO EL NUMERO 01255854 DEL LIBRO IX, FUE (RON) NOMBRADO (S):

NOMBRE

IDENTIFICACION

PRIMER SUPLENTE DE GERENTE

AREVALO HERNANDEZ EDGAR IVAN

C.C. 000000079423566

CERTIFICA:

FACULTADES DEL REPRESENTANTE LEGAL: A.- ADMINISTRAR LOS NEGOCIOS DE LA SOCIEDAD Y SUS BIENES Y REPRESENTAR A ESTA JUDICIAL Y EXTRAJUDICIALMENTE ANTE CUALESQUIERA PERSONAS, CONSTITUIR MANDATARIOS A GENERALES O ESPECIALES Y DELEGAR TEMPORALMENTE ALGUNA O ALGUNAS DE SUS FUNCIONES PARA CASOS CONCRETOS Y ESPECIFICOS PREVIA AUTORIZACION DE LA JUNTA DIRECTIVA, B.- CELEBRAR LIBREMENTE TODA CLASE DE NEGOCIOS QUE NO REQUIERAN AUTORIZACION DE LA ASAMBLEA DE ACCIONISTAS O DE LA JUNTA DIRECTIVA DE ACUERDO CON LOS ESTATUTOS; C.- LEGALIZAR Y EJECUTAR LOS ACTOS JURIDICOS PREVISTOS EN LOS ORDINALES E, F, G, H, I, Y L DEL ARTICULO TREINTA Y UNO (31); D.- NOMBRAR Y REMOVER LOS EMPLEADOS NECESARIOS PARA EL BUEN FUNCIONAMIENTO DE LA SOCIEDAD, CON EXCEPCION DE AQUELLOS CUYOS NOMBRAMIENTOS CORRESPONDE A LA JUNTA DIRECTIVA DE ACUERDO CON LOS ORDINALES H Y N DEL ARTICULO TREINTA Y UNO (31) DE ESTOS ESTATUTOS; E.- CONVOCAR A LA ASAMBLEA GENERAL DE ACCIONISTAS A SUS SESIONES ORDINARIAS Y EXTRAORDINARIAS Y A LAS REUNIONES DE LA JUNTA DIRECTIVA; F.- EJECUTAR LAS DECISIONES DE LA ASAMBLEA GENERAL Y DE LA JUNTA DIRECTIVA Y RENDIR A UNA Y A OTRA LOS INFORMES QUE LES SOLICITEN; G.- AUTORIZAR CON SU FIRMA LOS TITULOS DE ACCIONES; H.- RENDIR CUENTAS COMPROBADAS DE SU GESTION CUANDO SE LO EXIJA LA ASAMBLEA GENERAL DE ACCIONISTAS O LA JUNTA DIRECTIVA Y AL FINAL DE CADA AÑO Y CUANDO SE RETIRE DE SU CARGO; I.- COMO REGLA GENERAL EL GERENTE PODRA CON SUJECION A LAS LIMITACIONES Y REQUISITOS PREVISTOS EN ESTOS ESTATUTOS, REALIZAR LOS ACTOS Y CONTRATOS QUE COMPETEN A LA SOCIEDAD. COLOCAR PEDIDOS, CONTRATAR TRABAJADORES PARA EL SERVICIO DE LA SOCIEDAD, EXIGIR, COBRAR Y PERCIBIR CUALESQUIERA CANTIDADES DE DINERO O DE OTRAS ESPECIES QUE SE ADEUDEN A LA SOCIEDAD; PAGAR A LOS ACREEDORES DE LA SOCIEDAD LLEGAR A ARREGLOS CON ELLOS SOBRE TERMINOS DE PAGO SOBRE SUS ACREENCIAS, GIRAR, ENDOSAR, PROTESTAR, ACEPTAR, Y AFIANZAR TODA CLASE DE GIROS COMERCIALES GIRAR Y ENDOSAR CHEQUES, SUSCRIBIR, RECIBIR Y AFIANZAR PAGARES COMERCIALES, CONSTITUIR UY ACEPTAR DEPOSITOS EN DINERO, REALIZAR TODA CLASE DE TRANSACCIONES BANCARIAS TRANSIGIR CUALESQUIERA LITIGIOS RECLAMOS, Y OTROS CONFLICTOS QUE SE PROMUEVAN CON RESPECTO A LOS DERECHOS U OBLIGACIONES DE LA SOCIEDAD Y PRESENTARLA EN CUALESQUIERA ACTUACIONES O LITIGIOS JUDICIALES O ADMINISTRATIVOS EN QUE LA SOCIEDAD HA DE SER DIRECTA O INDIRECTAMENTE REPRESENTADA ACTIVA O PASIVAMENTE O A NOMBRE DE TERCERA PERSONA SEA PARA INICIAR, PROMOVER O TERMINAR TALES GESTIONES DESISTIR DE CUALESQUIERA JUICIOS O DE CUALESQUIERA RECURSOS APELACIONES U OTROS ACTOS JUDICIALES, REPRESENTAR A LA SOCIEDAD ANTE CUALQUIERA JUNTA DE ACREEDORES DE CARACTER JUDICIAL O EXTRAJUDICIAL, OIR, ACEPTAR, O RECHAZAR EN ELLAS LAS PROPUESTAS DE ARREGLO QUE SE HAGAN, CONFERIR A TERCEROS PODERES ESPECIALES PARA QUE REPRESENTEN VALIDAMENTE A LA SOCIEDAD CUANDO SEA NECESARIA Y REVOCAR TALES PODERES Y FINALMENTE, ACTUAR CUANDO QUIERA QUE FUERE NECESARIO EN DEFENSA DE LOS INTERESES DE LA SOCIEDAD. PARAGRAFO: CORRESPONDE A LA JUNTA DIRECTIVA AUTORIZAR AL GERENTE PARA ADQUIRIR O ENAJENAR BIENES INMUEBLES, PARA CONSTITUIR GRAVAMENES REALES SOBRE ELLOS O PRENDAS SOBRE BIENES INMUEBLES, GARANTIZAR O AFIANZAR OBLIGACIONES DE TERCEROS Y CAUCIONAR CON LOS BIENES SOCIALES OBLIGACIONES DISTINTAS DE LAS PROPIAS DE LA SOCIEDAD. AUTORIZAR AL GERENTE PARA REALIZAR TODOS LOS ACTOS, CONTRATOS E INVERSIONES



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EN BIENES DE CAPITAL O MEJORAS DE LOS MISMOS, QUE IMPLIQUEN UNA EROGACION QUE EXCEDA EL EQUIVALENTE EN PESOS COLOMBIANOS DE SEIS MIL (6000) SALARIOS MINIMOS MENSUALES LEGALES Y VIGENTES AL MOMENTO DE LA OPERACION, ASI COMO AUTORIZARLO PARA CONTRAER PRESTAMOS QUE SUPEREN EL EQUIVALENTE EN PESOS COLOMBIANOS DE SEIS MIL (6000) SALARIOS MINIMOS MENSUALES VIGENTES AL MOMENTO DE LA OPERACION.

CERTIFICA:

QUE POR ESCRITURA PUBLICA NO. 461 DE LA NOTARIA 32 DE BOGOTA D.C., DEL 25 DE FEBRERO DE 2003, INSCRITA EL 11 DE FEBRERO DE 2004 BAJO EL NO. 8793 DEL LIBRO V, COMPARECIO EL DOCTOR JORGE ALBERTO PINZON VARGAS, IDENTIFICADO CON CEDULA DE CIUDADANIA NO. 19.458.199, DE BOGOTA EN SU CALIDAD DE REPRESENTANTE LEGAL DE LA SOCIEDAD QUALA S.A., POR MEDIO DE LA PRESENTE ESCRITURA PUBLICA, CONFIERE PODER GENERAL A LOS DOCTORES SAIDA ANDREA QUINTERO MARTINEZ, IDENTIFICADA CON CEDULA CIUDADANIA NO. 51. 856. 332 DE BOGOTA Y TARJETA PROFESIONAL NUMERO 51.379 DEL CONSEJO SUPERIOR DE LA JUDICATURA, COMO PRINCIPAL, Y GLORIA ISABEL VARGAS TORRES, IDENTIFICADA CON CEDULA DE CIUDADANIA NO. 43.732.569 DE ENVIGADO Y TARJETA PROFESIONAL NUMERO 79.096 DEL CONSEJO SUPERIOR DE LA JUDICATURA, COMO SUSTITUTA, PARA QUE ACTUEN EN NOMBRE DE LA SOCIEDAD Y LA REPRESENTEN EN TODOS LOS ACTOS PROPIOS DEL DERECHO DE TRABAJO (ASUNTOS LABORALES), EN QUE LA EMPRESA DEBA INICIAR ACCIONES, COMPARECER POR SU PROPIA INICIATIVA A ACTUAR COMO DEMANDADA O CITADA ANTE CUALESQUIERA AUTORIDAD ADMINISTRATIVA, PRIVADA O JURISDICCIONAL DENTRO DEL TERRITORIO NACIONAL (I.S.S., E.P.S., ENTIDADES ADMINISTRADORAS DE RIESGOS PROFESIONALES, SENA., I.C.B.F., FONDOS DE PENSIONES, CAJAS DE COMPENSACION, ENTIDADES U ORGANISMO PRIVADOS, ADMINISTRATIVOS, DESCENTRALIZADOS, AUTONOMOS, MINISTERIOS, TRIBUNALES, NOTARIOS, CONSEJO DE ESTADO, CORTE SUPREMA DE JUSTICIA, ETC.), CON EL FIN DE CUMPLIR CUALQUIERA DE LAS SIGUIENTES ACTUACIONES, PRESENTACION, NOTIFICACION Y CONTESTACION, DE TODA CLASE DE RECLAMACIONES, RECURSOS Y DEMANDAS; INICIACION DE INVESTIGACIONES O COMPARECENCIA EN ELLAS COMO DEMANDANTE O DEMANDADO, ABSOLUCION DE INTERROGATORIOS DE PARTE CON LA FACULTAD DE CONFESAR, CONFERIR, TODA CLASE DE PODERES ESPECIALES DENTRO DE LOS TERMINOS DEL PRESENTE MANDATO A CRITERIO DEL MANDATARIOS (SIC) GENERAL, INTERPONER RECURSOS Y DESISTIR, CONCILIAR, TRANSIGIR, Y EN GENERAL TODAS AQUELLAS ACTUACIONES PROPIAS E INHERENTES AL MANDATO CONFORME A LAS ATRIBUCIONES LA LEY Y DEL PRESENTE PODER. DE LA MISMA MANERA, PARA REPRESENTAR A LA SOCIEDAD EN TODO LO RELACIONADO CON LOS TRABAJADORES DIRECTA E INDIRECTAMENTE, CON SUS ORGANIZACIONES SINDICALES Y LAS NEGOCIACIONES COLECTIVAS DE TRABAJO. LA RELACION QUE SE HACE ES

POR VIA ENUMERATIVA SOLAMENTE.

CERTIFICA : _

QUE POR ESCRITURA PUBLICA NO. 1775 DE LA NOTARIA 32 DE BOGOTA D.C., DEL 19 DE JULIO DE 2004, INSCRITA EL 18 DE AGOSTO DE 2004 BAJO EL NO. 9149 DEL LIBRO V, MODIFICADA POR ESCRITURA PUBLICA 2372 DEL 21 DE SEPTIEMBRE DE 2006 DE LA MISMA NOTARIA, INSCRITA EL 02 DE OCTUBRE DE 2006 BAJO EL NUMERO 11160 DEL LIBRO V, COMPARECIO EL DOCTOR JORGE ALBERTO PINZON VARGAS, IDENTIFICADO CON CEDULA DE CIUDADANIA NO. 19. 458. 199, DE BOGOTA EN SU CALIDAD DE REPRESENTANTE LEGAL DE LA SOCIEDAD QUALA S. A ., POR MEDIO DE LA PRESENTE ESCRITURA PUBLICA, MANIFESTO : PRIMERO : QUE OTORGA PODER GENERAL A FAVOR DE LAS SIGUIENTES PERSONAS : ELIANA PATRICIA DIAZ SANCHEZ, IDENTIFICADA CON LA CEDULA DE CIUDADANIA NUMERO 52. 117. 359 EXPEDIDA EN BOGOTA Y AL SEÑOR LUIS JAVIER JARAMILLO MONTOYA, IDENTIFICADO CON LA CEDULA DE CIUDADANIA NUMERO 10. 026. 249 EXPEDIDA EN PEREIRA, QUIEN OCUPARA EL CARGO DE ADMINISTRADORA DEL DISTRITO DE BARRANQUILLA, PARA QUE EN NOMBRE Y REPRESENTACION DE LA SOCIEDAD REALICEN LOS SIGUIENTES ACTOS ; A. ACEPTAR A NOMBRE DE QUALA S .A ., LA CONSTITUCION DE HIPOTECAS Y PRENDAS SIN TENENCIA A FAVOR DE LA MISMA, QUE OTORGUEN LOS CLIENTES DE LA EMPRESA PARA GARANTIZAR EL PAGO DE LAS OBLIGACIONES QUE CONTRAIGAN CON ELLA. SEGUNDO : EL PRESENTE PODER PERDERA SU VIGENCIA PARA CADA APODERADO CONSIDERADO INDIVIDUALMENTE EN EL MOMENTO EN QUE DEJE DE PRESTAR SUS SERVICIOS A LA SOCIEDAD QUALA S.A., O S (SIC) LA SOCIEDAD TOMA LA DECISION DE TRASLADAR EL EMPLEADO PARA DESEMPEÑAR CARGO DIFERENTES AL DE ADMINISTRADOR DE DISTRITO.

CERTIFICA : _

QUE POR ESCRITURA PUBLICA NO. 2218 DE LA NOTARIA 32 DE BOGOTA D.C., DEL 12 DE SEPTIEMBRE DE 2005, INSCRITA EL 11 DE OCTUBRE DE 2005 BAJO EL NO. 10075 DEL LIBRO V, COMPARECIO JORGE ALBERTO PINZON VARGAS, IDENTIFICADO CON LA CEDULA DE CIUDADANIA NO. 19.458.199 DE BOGOTA, OBRANDO COMO REPRESENTANTE LEGAL DE LA SOCIEDAD DE LA REFERENCIA POR MEDIO DE LA PRESENTE ESCRITURA PUBLICA OTORGA PODER GENERAL A FAVOR DEL SEÑOR ANDRES FERNANDO CORTES ROMERO, IDENTIFICADO CON LA CEDULA DE CIUDADANIA NUMERO 80.426.499 DE BOGOTA, QUIEN SE DESEMPEÑA COMO ADMINISTRADOR DEL DISTRITO DE BOGOTA, PARA QUE EN NOMBRE Y REPRESENTACION DE LA SOCIEDAD REALICE LOS SIGUIENTES ACTOS: A) ACEPTAR A NOMBRE DE QUALA S.A., LA CONSTITUCION DE HIPOTECAS Y PRENDAS SIN TENENCIA A FAVOR DE LA MISMA, QUE OTORGUEN LOS CLIENTES DE LA EMPRESA, PARA GARANTIZAR EL PAGO DE LAS OBLIGACIONES QUE CONTRAIGAN CON ELLA. SEGUNDO: EL PRESENTE PODER PERDERA SU VIGENCIA PARA EL APODERADO, EN EL MOMENTO EN QUE DEJE DE PRESTAR SUS SERVICIOS A LA SOCIEDAD QUALA S.A., O LA SOCIEDAD TOMA LA DECISION DE TRASLADAR AL EMPLEADO PARA DESEMPEÑAR CARGO DIFERENTE AL DE ADMINISTRADOR DE DISTRITO.

CERTIFICA : _

QUE POR ESCRITURA PUBLICA NO. 2372 DE LA NOTARIA 32 DE BOGOTA D.C., DE 21 DE SEPTIEMBRE DE 2006, INSCRITA EL 02 DE OCTUBRE DE 2006, BAJO EL NO. 11161 DEL LIBRO V, COMPARECIO JORGE ALBERTO PINZON VARGAS IDENTIFICADO CON CEDULA DE CIUDADANIA NO. 19.458.199, DE BOGOTA, EN SU CALIDAD DE REPRESENTANTE LEGAL DE LA SOCIEDAD DE LA REFERENCIA, POR MEDIO DE LA PRESENTE ESCRITURA PUBLICA, CONFIERE PODER GENERAL A MARIA XIMENA BELTRAN GAITAN IDENTIFICADA CON CEDULA DE CIUDADANIA NO. 63. 483. 866 DE



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BUCARAMANGA, QUIEN SE DESEMPEÑA COMO ADMINISTRADORA DEL DISTRITO BUCARAMANGA, PARA QUE EN NOMBRE Y REPRESENTACION DE LA SOCIEDAD REALICE LOS SIGUIENTES ACTOS: A) ACEPTAR A NOMBRE DE QUALA S.A., LA CONSTITUCION DE HIPOTECAS Y PRENDAS SIN TENENCIA A FAVOR DE LA MISMA, QUE OTORGUEN LOS CLIENTES DE LA EMPRESA, PARA GARANTIZAR EL PAGO DE LAS OBLIGACIONES QUE CONTRAIGAN CON ELLA. EL PRESENTE PODER PERDERA SU VIGENCIA PARA CADA APODERADO CONSIDERADO INDIVIDUALMENTE, EN EL MOMENTO EN QUE DEJE DE PRESTAR SUS SERVICIOS COMO EMPLEADO A LA SOCIEDAD QUALA S.A., O SI LA SOCIEDAD TOMA LA DECISION DE TRASLADAR AL EMPLEADO PARA DESEMPEÑAR CARGOS DIFERENTES AL DE ADMINISTRADOR DE DISTRITO.

CERTIFICA :

QUE POR ESCRITURA PUBLICA NO. 2372 DE LA NOTARIA 32 DE BOGOTA D.C., DE 21 DE SEPTIEMBRE DE 2006, INSCRITA EL 02 DE OCTUBRE DE 2006, BAJO EL NO. 11162 DEL LIBRO V, COMPARECIO JORGE ALBERTO PINZON VARGAS, IDENTIFICADO CON CEDULA DE CIUDADANIA NO. 19.458.199, DE BOGOTA, EN SU CALIDAD DE REPRESENTANTE LEGAL DE LA SOCIEDAD DE LA REFERENCIA, POR MEDIO DE LA PRESENTE ESCRITURA PUBLICA, CONFIERE PODER GENERAL A OMAR DARIO QUIJANO REYES, IDENTIFICADO CON CEDULA DE CIUDADANIA NO. 94.507.853 DE CALI, QUIEN OCUPA EL CARGO DE ADMINISTRADOR DEL DISTRITO CALI, EN REEMPLAZO DE LA SEÑORITA MARIA XIMENA BERNAL GAITAN. PARA QUE EN NOMBRE Y REPRESENTACION DE LA SOCIEDAD REALICE LOS SIGUIENTES ACTOS: A) ACEPTAR A NOMBRE DE QUALA S.A., LA CONSTITUCION DE HIPOTECAS Y PRENDAS SIN TENENCIA A FAVOR DE LA MISMA, QUE OTORGUEN LOS CLIENTES DE LA EMPRESA, PARA GARANTIZAR EL PAGO DE LAS OBLIGACIONES QUE CONTRAIGAN CON ELLA. SEGUNDO: EL PRESENTE PODER PERDERA SU VIGENCIA PARA CADA APODERADO CONSIDERADO INDIVIDUALMENTE, EN EL MOMENTO EN QUE DEJE DE PRESTAR SUS SERVICIOS COMO EMPLEADO A LA SOCIEDAD QUALA S.A., O SI LA SOCIEDAD TOMA LA DECISION DE TRASLADAR AL EMPLEADO PARA DESEMPEÑAR CARGOS DIFERENTES AL DE ADMINISTRADOR DE DISTRITO. TERCERO: REVOCAR PARCIALMENTE EL PODER OTORGADO A LA SEÑORITA MARIA XIMENA BERNAL GAITAN IDENTIFICADA CON LA CEDULA DE CIUDADANIA NO. 63.483.866 EXPEDIDA EN BUCARAMANGA, MEDIANTE ESCRITURA PUBLICA NUMERO MIL SETECIENTOS SETENTA Y CINCO (1.775) DEL VEINTIDOS (22) DE JULIO DE DOS MIL CUATRO (2.004), OTORGADA EN LA NOTARIA TREINTA Y DOS (32) DE BOGOTA, PARA ACTUAR COMO ADMINISTRADORA DEL DISTRITO CALI.

CERTIFICA:

** REVISOR FISCAL **

QUE POR ACTA NO. 0000034 DE ASAMBLEA DE ACCIONISTAS DEL 21 DE FEBRERO DE 2003, INSCRITA EL 27 DE MARZO DE 2003 BAJO EL NUMERO 00872625 DEL LIBRO IX, FUE (RON) NOMBRADO (S):

NOMBRE

IDENTIFICACION

REVISOR FISCAL

CABADELPA COLOMBIA S.A. N.I.T. 000008300507951
QUE POR DOCUMENTO PRIVADO DEL 26 DE MARZO DE 2003, INSCRITA EL 27 DE
MARZO DE 2003 BAJO EL NUMERO 00872627 DEL LIBRO IX, FUE (RON) NOMBRADO
(S):

NOMBRE	IDENTIFICACION
REVISOR FISCAL PRINCIPAL	
DELGADO ROMERO HECTOR GUSTAVO	C.C. 000000019396732
REVISOR FISCAL SUPLENTE	
PARDO DE DELGADO REINA	C.C. 000000051671496

QUE POR DOCUMENTO PRIVADO NO. DE REVISOR FISCAL DEL 29 DE ABRIL DE
2009, INSCRITA EL 5 DE MAYO DE 2009 BAJO EL NUMERO 01294326 DEL LIBRO
IX, FUE (RON) NOMBRADO (S):

NOMBRE	IDENTIFICACION
REVISOR FISCAL SEGUNDO SUPLENTE	
CASTRO DIAZ CARLOS JAVIER	C.C. 000000011200284

CERTIFICA:

QUE POR DOCUMENTO PRIVADO DE DEL 30 DE SEPTIEMBRE DE 2003, INSCRITA EL
4 DE NOVIEMBRE DE 2003 BAJO EL NUMERO 00904905 DEL LIBRO IX, COMUNICO
LA SOCIEDAD MATRIZ:

- QUALA INC.

DOMICILIO: (FUERA DEL PAIS)

QUE SE HA CONFIGURADO UNA SITUACION DE CONTROL CON LA SOCIEDAD DE LA
REFERENCIA.

CERTIFICA:

QUE LA SOCIEDAD TIENE MATRICULADOS LOS SIGUIENTES ESTABLECIMIENTOS:

NOMBRE : QUALA

MATRICULA NO : 00130710 DE 13 DE FEBRERO DE 1980

RENOVACION DE LA MATRICULA : EL 13 DE MARZO DE 2009

ULTIMO AÑO RENOVADO : 2009

CERTIFICA:

DE CONFORMIDAD CON LO ESTABLECIDO POR LA LEY 962 DE 2005, LOS ACTOS DE
REGISTRO AQUI CERTIFICADOS QUEDAN EN FIRME CINCO (5) DIAS HABILES
DESPUES DE LA FECHA DE INSCRIPCION, SIEMPRE QUE NO SEAN OBJETO DE
RECURSOS EN LA VIA GUBERNATIVA.

* * * EL PRESENTE CERTIFICADO NO CONSTITUYE PERMISO DE * * *
* * * FUNCIONAMIENTO EN NINGUN CASO * * *

EL SECRETARIO DE LA CAMARA DE COMERCIO,

VALOR : \$ 3,500

DE CONFORMIDAD CON EL DECRETO 2150 DE 1995 Y LA AUTORIZACION IMPARTIDA
POR LA SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO, MEDIANTE EL OFICIO
DEL 18 DE NOVIEMBRE DE 1996, LA FIRMA MECANICA QUE APARECE A
CONTINUACION TIENE PLENA VALIDEZ PARA TODOS LOS EFECTOS LEGALES



SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

NIT : 800176089-2

RECIBO OFICIAL DE CAJA : 09 - 88,944
FECHA : NOVIEMBRE 26 DE 2009

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 08-019270- -00004-0000

Fecha: 2009-11-26 15:05:10 Dep. 2020 DIR.NUEVASCR
Tra. 2 PATENTES Eve: 1 REGDEPOSITO
Act. 400 OPOSIOBSERVTER Folios: 57

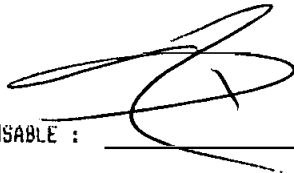
***** CONSIGNACION *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PGO	Vr. PAGO
MARTINEZ Y TOBOS S A S	CONSIGNACION	BANCO DE BOGOTA	062754387	173396241	26/11/2009	1,722,000.00

***** CONCEPTO *****

CANT.	RENTISTICO	CONCEPTO	TOTAL CONCEPTO
1	50005-01-04	PRESENTACION DE OBSERVACIONES	
		12 MARCAS Y LEMAS COMERCIALES	287,000.00
		TOTAL :	\$ 287,000.00

SON: DOSCIENTOS OCHENTA Y SIETE MIL PESOS

RESPONSABLE : 

RECIBO DE CAJA APLICADO AL EXPEDIENTE No. _____

130



Industria y Comercio
SUPERINTENDENCIA

2020
Bogotá, D.C.,

Doctora:
Alicia Lloreda Ricaurte
Apoderada

Oficio N°:
N. 02566

ASUNTO:	Radicación N°	08-19270
	Trámite	002
	Evento	001
	Actuación	440
	Folios	058

Con fundamento en lo previsto por el artículo 43 de la Decisión 486 de la Comisión de la Comunidad Andina, se le comunica que la oposición presentada por la doctora Andrea Tobos Mateus, en su calidad de apoderada de Quala S.A., reúne los requisitos formales exigidos por la ley al momento de su presentación.

En cumplimiento de lo dispuesto en la citada norma, se le concede el término de sesenta (60) días hábiles siguientes a la fecha de notificación del presente oficio, para que haga valer sus argumentaciones y presente pruebas.

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 CESPEDES DE VERGEL
Directora de Nuevas Creaciones (C).

El anterior oficio fue notificado por fijación en lista de fecha, 26 FEB. 2010

202021