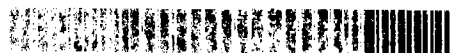


142 128
112

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



Nº. 06-120200-00000-0000

FASE NACIONAL DE NUEVAS CREACIONES
PATENTE DE INVENCION

AS: 102.271

Señores

**SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIVISION DE NUEVAS CREACIONES**

E. S. D.

REF.: Expediente No. 06 120.200 - Solicitud de Patente FASE NACIONAL

Corresp. a la Solicitud Internacional PCT/US2005/016146

a nombre de: **COLGATE - PALMOLIVE COMPANY.**

Titulada: **COMPOSICIONES BLANQUEADORAS DE DIENTES QUE
COMPREDEN POLÍMERO DE SILICONA Y SUS MÉTODOS.**

JUAN PABLO CADENA SARMIENTO, vecino de Bogotá, portador de la tarjeta profesional No. 57492 del Consejo Superior de la Judicatura, obrando como apoderado de la Sociedad **COLGATE - PALMOLIVE COMPANY**, según lo acredita el documento de poder presentado en esa División, de acuerdo con el Artículo 44 de la Decisión 486 de la Comisión de la Comunidad Andina, me permito solicitar que se examine si la invención contenida en la solicitud en referencia es patentable.

De acuerdo con lo anterior, me permito anexar el recibo oficial de caja No. 07-67,235 por valor de \$404.000.

De la Señora Jefe atentamente,


JUAN PABLO CADENA SARMIENTO

C.C. No. 80.410.337 de Usaquén

T.P. No. 57492 del C.S.J.

Cra 7 No. 71-21 Torre B, Piso 4

Bogotá, 19 de octubre de 2007

CHP/MEV/jpg

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As. 102271
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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

NIT : 800176089-2

RECIBO OFICIAL DE CAJA : 07 - 67,235
FECHA : AGOSTO 21 DE 2007

SECRETARIA DE INDUSTRIA Y COMERCIO
CORREO ELECTRONICO: comercio@superindustrial.gov.co
TEL: 378 4444
FAX: 378 4444
BOGOTA, D.C.

***** CONSIGNACION *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PGO	Vr. PAGO
BRIGARD Y CASTRO	CONSIGNACION	BANCO POPULAR	050-00110-6	51181692	17/08/2007	16,740,000.00

***** CONCEPTO *****

CANT.	RENTISTICO	CONCEPTO	TOTAL CONCEPTO
1	50005-01-01	SOLICITUDES	
		85 EXAMEN DE PATENTABILIDAD DE INVEN	404,000.00
		TOTAL :	\$ 404,000.00

SON: CUATROCIENTOS CUATRO MIL PESOS

RESPONSABLE : _____

RECIBO DE CAJA APLICADO AL EXPEDIENTE No. _____

H4114

DIVISIÓN DE NUEVAS CREACIONES

RADICACIÓN EXPEDIENTE No. 06-120200

EL EXTRACTO DE LA PRESENTE SOLICITUD DE **PATENTE DE INVENCION**

FUE PUBLICADO EN LA GACETA DE PROPIEDAD INDUSTRIAL No **575** DE

FECHA **30 DE ABRIL DE 2007** EL TÉRMINO HÁBIL SEÑALADO POR LA LEY

EXPIRA EL **31 DE JULIO DE 2007**

NOTA: Dentro del plazo de los seis (6) meses siguientes a partir de la fecha de publicación en la gaceta de Propiedad Industrial, deberá solicitar y cancelar el examen de patentabilidad so pena de que la solicitud caiga en abandono, de acuerdo con lo establecido en el Artículo 44 de la Decisión 486/2000.

SE PRESENTARON OPOSICIONES POR PARTE DE TERCEROS.

SI _____

NO X

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
11 January 2001 (11.01.2001)

PCT

(10) International Publication Number
WO 01/01939 A1(51) International Patent Classification⁷: **A61K 7/16**[US/CN]; White Swan Garden, Apt. #325, 1 Shamian GZ,
Guangzhou 510133 (CN).(21) International Application Number: **PCT/US00/15890**(22) International Filing Date: **9 June 2000 (09.06.2000)**(74) Agents: **REED, T., David et al.**; The Procter & Gamble Company, 5299 Spring Grove Avenue, Cincinnati, OH 45217-1087 (US).(25) Filing Language: **English**(26) Publication Language: **English**(30) Priority Data:
PCT/US99/15130 **2 July 1999 (02.07.1999)** **US**(71) Applicant (for all designated States except US): **THE PROCTER & GAMBLE COMPANY** [US/US]; One Procter & Gamble Plaza, Cincinnati, OH 45202 (US).

(81) Designated States (national): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, EE, ES, FI, FR, GB, GD, GE, GH, GM, GR, GU, HK, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, SM, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

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With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette



WO 01/01939 A1

(54) Title: COMPOSITIONS COMPRISING ORGANOSILOXANE RESINS FOR DELIVERING ORAL CARE SUBSTANCES

(57) Abstract: Disclosed is a composition for delivering an oral care substance to the oral cavity, comprising: (a) an organosiloxane resin; (b) a volatile carrier capable of solubilizing the organosiloxane resin; (c) a rheology modifier; and (d) at least one oral care substance. The present invention is also directed to such compositions comprising: (a) an organosiloxane resin; (b) a fluid diorganopolysiloxane polymer; (c) a volatile carrier capable of solubilizing the organosiloxane resin and the fluid diorganopolysiloxane polymer; (d) a rheology modifier; and (e) at least one oral care substance. Further disclosed is a method of using these compositions.

COMPOSITIONS COMPRISING ORGANOSILOXANE RESINS FOR DELIVERING ORAL CARE SUBSTANCES

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FIELD

The present invention relates to compositions for delivering oral care substances to the surfaces of the teeth. The composition forms a film on the surface to which it has been applied. Said film contains oral care substances for enhancing the appearance of the teeth. These films may also provide sustained release of certain oral care substances from the film for prolonged therapeutic and, or prophylactic benefits. More specifically, the present invention relates to compositions comprising organosiloxane resins for delivering oral care substances to the tooth enamel. In addition, it is believed that the compositions herein may further provide sustained release benefits to other oral surfaces, such as the gingival and mucosal tissues, as well as to the surfaces of the teeth.

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BACKGROUND

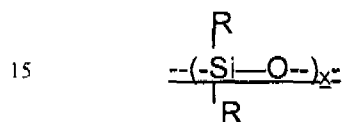
Oral care products by which various oral care substances or actives can be delivered to the soft and hard tissues of the oral cavity have previously been known. Examples of such oral care products include, for example, brushing aids such as dentifrice products for delivery of anti-caries actives such as fluoride or other actives for the reduction of the bacteria that lead to the formation of plaque, and mouthwashes containing breath freshening actives and/or anti-bacterial actives. In addition, bleaching agents such as peroxide that can be applied

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group consisting of radicals containing from 1-6 carbon atoms, hydroxyl groups, alkoxyl groups, and mixtures thereof. The fluid diorganopolysiloxane polymer must be compatible in solution with the organosiloxane resin and the volatile carrier. The term "compatible" refers to the formation of a single phase solution
5 when the fluid diorganopolysiloxane polymer, the organosiloxane resin and the volatile carrier are mixed together in ratios required for a specific formulation. For example, the lower viscosity fluid diorganopolysiloxane polymers (viscosity of about 10 to 100cSt.) are particularly useful when using ethanol as the principal volatile carrier. For higher viscosity polymers, e.g., poly(dimethylsiloxane), herein
10 referred to as PDMS or silicone gum, having a viscosity of at least 100,000 cSt, volatile carriers other than ethanol are preferred.

Silicone gum corresponds to the formula:



where R is a methyl group.

20 Fluid diorganopolysiloxane polymers such as these are commercially available, for example, SE 30 silicone gum and SF96 silicone fluid available from the General Electric Company. Similar materials can also be obtained from Dow Corning and from Wacker Silicones.

Another fluid diorganosiloxane-based polymer preferred for use in the
25 present invention is a dimethicone copolyol to modify film forming characteristics as desired. The dimethicone copolyol can be further characterized as polyalkylene oxide modified polydimethylsiloxanes, such as manufactured by the Witco Corporation under the trade name Silwet. Similar materials can be obtained from Dow Corning, Wacker Silicones and Goldschmidt Chemical
30 Corporation as well as other silicone manufacturers.

The rheology modifier is preferably present in the composition at a level of from about 0.1% to about 30%, preferably from about 0.5% to about 10%, and even more preferably 1% to about 3% of the composition.

Oral Care Substances

5 The oral care substance preferably contains an active at a level where upon directed use, the benefit sought by the wearer is promoted without detriment to the oral surface to which it is applied. Examples of the oral conditions these actives address include, but, are not limited to, appearance and structural changes to teeth, whitening, stain bleaching, stain removal, plaque
10 removal, tartar removal, cavity prevention and treatment, inflamed and/or bleeding gums, mucosal wounds, lesions, ulcers, aphthous ulcers, cold sores, tooth abscesses, and the elimination of mouth malodor resulting from the conditions above and other causes such as microbial proliferation.

Suitable oral care substances include any material that is generally
15 considered safe for use in the oral cavity and that provides changes to the overall appearance and/or health of the oral cavity. The level of oral care substance in the compositions of the present invention is generally, unless specifically noted, from about 0.01% to about 50%, preferably from about 0.1% to about 20%, more preferably from about 0.5% to about 10%, and even more preferably from about
20 1% to about 7%, by weight of the composition.

Oral care compositions or substances of the present invention may include many of the actives previously disclosed in the art. The following is a non-limiting list of oral care actives that may be used in the present invention.

1. Teeth Color Modifying Substances

25 Teeth color modifying substances may be considered among the oral care substance useful in the present invention. These substances are suitable for modifying the color of the teeth to satisfy the consumer. These substances comprise particles that when applied on the tooth surface modify that surface in terms of absorption and, or reflection of light. Such particles provide an appearance benefit
30 when a film containing such particles is applied over the surfaces of a tooth or teeth.

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Table 2a: Teeth Color Modifying Compositions

Component	Ex.1	Ex.2	Ex.3	Ex.4	Ex.5	Ex.6
Ethyl Acetate	26.00	22.00	34.00	28.00	25.77	23.00
2-Butanone	25.95	17.00	9.00	14.50	25.50	23.45
Isododecane	-	10.00	-	-	5.00	-
Limonene	-	4.00	-	-	-	-
MQ Resin	28.00	32.50	33.00	35.00	27.00	28.00
SE 30 Silicone Gum	7.00	-	11.00	5.00	3.00	7.00
Silicone Fluid (10cStk)	-	6.50	-	-	-	-
Bentone Gel ISD	10.00	-	8.00	10.00	10.00	-
Claytone HY	-	2.00	-	-	-	7.00
Cab-o-Sil	-	-	1.50	-	-	-
Bismuth Oxychloride	-	5.00	-	-	-	10.00
Titanium Dioxide	3.0	-	1.00	5.00	2.00	-
Flavor Oil	-	-	0.10	-	0.15	0.15
Polymethyl- silsesquioxane	-	-	1.00	-	-	-
Polymethyl- methacrylate	-	1.00	-	-	0.50	-
Nylon 12	-	-	-	2.00	-	1.00
Silica	-	-	-	-	0.50	-
F&D&C Yellow #5	0.05	-	0.10	-	0.05	0.10
Aluminum Lake	-	-	-	-	-	-
Iron Oxide, red	-	-	-	0.50	0.03	-
Sodium Fluoride	-	-	1.0	-	-	-
Sodium Saccharin	-	-	0.30	-	0.50	0.30
	100.00	100.00	100.00	100.00	100.00	100.00

Table 2b. Teeth Color Modifying Compositions

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cSt						
Silicone Fluid 10 cStk	--	4.00	11.05	--	--	4.30
Silwet L-7500	--	--	--	--	6.85	--
Bentone 27	1.85	1.35	2.00	2.27	1.97	1.70
Cab-o-Sil	--	0.45	--	--	--	--
Bismuth Oxychloride	--	5.00	--	--	--	10.00
Titanium Dioxide	3.00	--	1.00	5.00	2.00	--
Flavor Oil	--	--	0.10	--	0.15	0.15
Polymethyl- silsesquioxane	--	--	1.00	--	--	--
Polymethyl- methacrylate	--	1.00	--	--	0.50	--
Nylon 12	--	--	--	2.00	--	1.00
silica	--	--	--	--	0.50	--
FD&C Yellow #5 Al Lake	0.05	--	0.10	--	0.05	0.10
Iron Oxide, Red	--	--	--	0.50	0.03	--
Sodium Fluoride	--	--	1.00	--	--	--
Sodium Saccharin	--	--	0.30	--	0.50	0.30
	100.00	100.00	100.00	100.00	100.00	100.00

Table 3: Oral Care Compositions

Component	Ex.1	Ex.2	Ex.3	Ex.4	Ex.5
Ethyl Acetate	24.50	27.75	22.00	19.96	21.10
2-Butanone	24.50	16.30	22.00	10.00	21.10
Isododecane	-	-	-	11.54	-
Limonene	-	-	-	5.00	-
MQ Resin	30.40	33.00	28.80	36.00	32.84
SE 30 Silicone Gum	7.60	11.00	14.40	-	8.21
Silicone Fluid 10cStk	-	-	-	9.00	-

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U.S. Patent 5,747,070, issued May 5, 1998 to Satyanarayana Majeti, incorporated herein by reference in its entirety. Said Patent discloses the use of stannous salts to control viruses. Stannous salts and other anti-viral actives are described in detail in Kirk & Othmer, Encyclopedia of Chemical Technology, Third Edition, Volume 23, Wiley-Interscience Publishers (1982), pp. 42-71, incorporated herein by reference in its entirety. The stannous salts that may be used in the present invention would include organic stannous carboxylates and inorganic stannous halides. While stannous fluoride may be used, it is typically used only in combination with another stannous halide or one or more stannous carboxylates or another therapeutic agent.

12. Other Ingredients

In addition to the above materials of the composition of the present invention, a number of other components may desirably be added to the oral care substance. Additional components include, but are not limited to, flavoring agents, sweetening agents, xylitol, surfactants, and chelants such as ethylenediaminetetraacetic acid. Suitable flavoring agents include, but are not limited to, oil of peppermint, oil of sassafras, clove bud oil, peppermint, menthol, anethole, thymol, methyl salicylate, eucalyptol, cassia, 1-menthyl acetate, sage, eugenol, parsley oil, oxanone, oil of wintergreen, alpha-irisone, oil of spearmint, marjoram, lemon, orange, propenyl guaethol, cinnamon, and mixtures thereof.

These additional ingredients can also be used in place of the compounds disclosed above.

EXAMPLES

The following examples further describe and demonstrate embodiments within the scope of the present invention. The examples are given solely for the purpose of illustration and are not to be construed as limitations of the present invention, as many variations thereof are possible without departing from the spirit and scope of the invention.

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Table 1: Hydrophobic Oral Care Composition

Component	Ex.1	Ex.2	Ex.3	Ex.4	Ex.5	Ex.6
Organosiloxane Resin ¹	25	25	24.6	25	25	25
Silicone Gum ²	12.5	4.2	3.5	2.5	1.8	--
Oral Care Substance	17	17	17	17	17	17
Volatile Carrier ³	44.5	52.8	53.9	54.5	55.2	57.0
Bentone Clay ⁴	1	1	1	1	1	1
TOTAL	100	100	100	100	100	100

1. E.g., MQ resin available as 1170-002 from General Electric.

2. E.g., Dimethicone gum available as SE 63 or SE 30 from General Electric.

5 3. E.g., Isododecane or a 50/50 mixture of ethyl acetate and butanone or a mixture of ethyl acetate, propyl acetate and HFE. The percentage of each individual solvent component in the mixed solvent systems can vary from 0 to 100%, respectively.

4. Bentone 27 available from Rheox.

10 Method of Preparation

The compositions of Table 1 are non-aqueous. The oral care substances are dispersed or dissolved in a solution comprising the organosiloxane resin, the fluid diorganopolysiloxane polymer, the volatile carrier, and the rheology modifier.

The hydrophobic compositions of Table 1 are suitably prepared as follows.

15 Three hundred (300) grams of organosiloxane resin solution (for example, 43.7% MQ resin solution in isododecane or in a 50/50 mixture of ethyl acetate and butanone or in a mixture of ethyl acetate, propyl acetate and HFE) are mixed with 147.30 grams of fluid diorganopolysiloxane polymer solution (for example, 50% SE 30 silicone gum solution in isododecane or a 50/50 mixture of ethyl acetate and butanone or a mixture of ethyl acetate, propyl acetate and HFE). The oral

20 care substances are then dispersed in the resin/gum mixture. This method may be carried out without the presence of the silicone gum.

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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIRECCION DE NUEVAS CREACIONES

2020
Bogotá, D.C.,

Abogado
JUAN PABLO CADENA SARMIENTO
Apoderado

ASUNTO Radicación 06-120200
 Trámite 011
 Evento 379
 Actuación 430
 Oficio
 Folios 125 ³⁵⁸²

Patente de Invención ☒ Patente de Modelo de Utilidad ☐
Vía Nacional ☐
Vía PCT (fase nacional) ☒ Cap. I ☒ Cap. II ☐
No. Sol. Internacional PCT/US2005/016146
Fecha de Presentación Internal. 2005/05/10

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

1. Documentos estudiados

Descripción: Folios: 40 a 67 como se radicó inicialmente
Reivindicaciones: Folios 68 a 73
Prioridad: Fecha: 2004/05/10, país: US y número: 10/842.154

2. Objeto de la invención

- Título de la solicitud: Composiciones blanqueadoras de dientes que comprenden polímero de silicona y sus métodos. Número de folio:1

El problema planteado en esta solicitud es la necesidad de composiciones y metodos para impartir blancura a los dientes que no requieran la destrucción del enamel dental.

Para solucionar este problema técnico la solicitud en estudio proporciona fluidos con partículas de hidroxapatita y un polímero de organosiloxano que imparten blancura a los dientes.

Clasificación Internacional de Patentes (IPC.): A61K 7/16

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3. De la solicitud de Patente

Reivindicaciones (artículo 30 D 486)

Una vez revisado el capítulo reivindicatorio esta dependencia encuentra:

- Reivindicación 7: Se está caracterizando el fluido por el registro de Chemical Abstract del polímero lo cual es inaceptable.

4. Excepción a la patentabilidad (artículo 20 D486 literal a)-d)

Reivindicaciones 14 - 20: Se refiere a un método para el tratamiento de un diente mediante el fluido reivindicado por lo tanto están exceptuadas de patentabilidad según la legislación vigente.

5. Determinación del Estado de la Técnica

La fecha que se ha tenido en cuenta para determinar el Estado de la Técnica es:

Fecha de presentación de la solicitud prioritaria 2004/05/10

Teniendo en cuenta la fecha indicada se realizó la búsqueda en el estado de la técnica de documentos relacionados con la solicitud encontrándose los siguientes documentos más relevantes:

Nº	Documento	Título	Fecha de publicación*
D ₁	WO 01/01939	COMPOSITIONS COMPRISING ORGANOSILOXANE RESINS FOR DELIVERING ORAL CARE SUBSTANCES	2001/01/11

6. Análisis de patentabilidad (artículo 14 D486)

Novedad (artículo 16 D486)

Reivindicación 1: Un fluido para recubrir un diente caracterizado porque comprende partículas blancas y al menos un polímero de organosiloxano.

D1 enseña composiciones formadoras película dental. La película contiene sustancias para mantener la apariencia de los dientes. Comprende: resinas de organosiloxano (p 1 ln 13-22), dimeticona copoliol para modificar las características de la película formadora (p 7 ln 24-30), modificadores del color de dientes (Pag 10-12), pigmentos blancos (ej TiO₂, Nylon, silica), resinas de silicona, goma de silicona, polimetilsilsesquioxano y dimeticona. (ver folios 115 y siguientes)

- ♦ Los elementos característicos del fluido reivindicado habían sido divulgados previamente en el Estado de la Técnica según la tabla siguiente:

TABLA 1	
CARACTERÍSTICAS REIVINDICADAS	D ₁
fluido para recubrir un diente	SI F 115 abstract, 116
partículas blancas	SI F 118, ln 25-30, 119,
polímero de organosiloxano	SI F 115 abstract, 117 ln 25

De manera que el objeto de esta solicitud, tal como aparece en las reivindicaciones 1 – 13, no es nuevo.

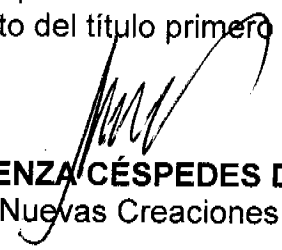
6. Conclusión:

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

Nº	Documento Nº	Reivindicaciones afectadas	Requisito que afecta
D ₁	WO 01/01939	1-13	NOVEDAD

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

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5.2, literal e), del capítulo quinto del título primero de la Circular Única Nº 10 de 2001.


ALIX CARMENZA CÉSPEDES DE VERGEL
Directora de Nuevas Creaciones (C)

El anterior requerimiento fue notificado por fijación en lista, de fecha _____

CONCEPTO TÉCNICO No. 511	EXAMINADOR TÉCNICO Código No. 202087
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