

AS: 102.233

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 06-117705-00001-0000

Fecha: 2007-10-19 16:30:08 Dep. 2020 NUECREACION
Tr. 11 PATENTE/II: Eje: 378 FASENACIONALI
Act. 533 PETICION Fojos. 2

Señores

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

DIVISION DE NUEVAS CREACIONES

E. S. D.

REF.: Expediente No. 06 117.705 - Solicitud de Patente FASE NACIONAL

Corresp. a la Solicitud Internacional PCT/US2005/016165

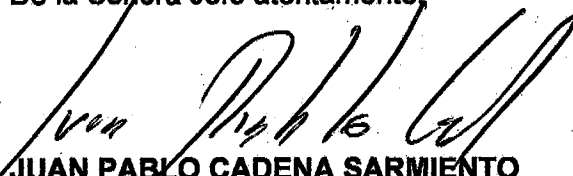
a nombre de: **COLGATE - PALMOLIVE COMPANY.**

Titulada: BANDAS MULTICAPA BLANQUEADORAS DE DIENTES.

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. 07-42,749 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

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AS 102 233

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2

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

NIT : 900174089-2

RECIBO OFICIAL DE CAJA : 07 - 42,749

FECHA : MAYO 28 DE 2007

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 06-117705- -00001-0000

Fecha: 2007-10-19 16:30:06 Dep. 2020 NUECREACIONE

Tra. 11 PATENTE IYII Eve: 378 FASE NACIONAL I

Act. 538 PETICION

Folios: 2

CONSIGNACION

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PGO	VR. PAGO
BRIGARD & CASTRO LTDA	CONSIGNACION	BANCO POPULAR	050-00110-4	35611221	28/05/2007	14,050,000.00

CONCEPTO

CANT. HISTORICO	CONCEPTO	TOTAL CONCEPTO
1 50003-01-01 SOLICITUDES	05 EXAMEN DE PATENTABILIDAD DE OBRAS	404,000.00
	TOTAL :	\$ 404,000.00

SON: CUATROCIENTOS CUATRO MIL PESOS

RESPONSABLE :

RECIBO DE CAJA APLICADO AL EXPEDIENTE NO.

08.05.07

DIVISIÓN DE NUEVAS CREACIONES

RADICACIÓN EXPEDIENTE No. 06-117705

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



US 2004/0062724A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2004/0062724 A1**
Moro et al. (43) **Pub. Date: Apr. 1, 2004**(54) **ERODIBLE FILM FOR TREATING THE
SURFACES OF TEETH****Publication Classification**(76) **Inventors:** Daniel G. Moro, Dallas, TX (US);
Ernest Howard Callahan JR., North
Richland Hills, TX (US); David P.
Nowotnik, Colleyville, TX (US)(51) **Int. Cl.** A61K 7/20
(52) **U.S. Cl.** 424/53**Correspondence Address:****BINGHAM, MCCUTCHEN LLP
THREE EMBARCADERO, SUITE 1800
SAN FRANCISCO, CA 94111-4067 (US)**(57) **ABSTRACT**(21) **Appl. No.:** 10/444,512(22) **Filed:** May 23, 2003**Related U.S. Application Data**(63) Continuation-in-part of application No. 09/931,319,
filed on Aug. 16, 2001, now Pat. No. 6,585,997.

A thin, flexible, bilayer or multi-layer film which when applied to teeth surfaces adheres and delivers an active compound to the underlying surface and erodes at a predetermined rate. The amount of time that the active agent remains in contact with the teeth surfaces is controlled by the composition of backing layer of the composite film. This erosion or residence time can be regulated one half hour to three hours, depending upon the desired therapeutic or cosmetic application.

ERODIBLE FILM FOR TREATING THE SURFACES OF TEETH

[0001] This application is a continuation-in-part and is based on and claims priority from U.S. patent application Ser. No. 09/931,319, filed Aug. 16, 2001 and is incorporated herein by reference.

FIELD OF THE INVENTION

[0002] This invention relates to the cosmetic or therapeutic treatment of teeth, and more specifically to an adherent, erodible film that provides an active ingredient agent to teeth surfaces for a prolonged and controlled period of time.

BACKGROUND OF THE INVENTION

[0003] A tooth is composed of a protective, hard enamel outer layer and an inner dentin layer. The enamel layer is typically opaque white or slightly off-white in color. This layer is composed of hydroxyapatite mineral crystals and is somewhat porous, allowing staining agents and discoloring substances to permeate the enamel and discolor teeth. In particular, certain foods, tobacco products and liquids such as tea and coffee tend to stain teeth. These substances accumulate on the surface and form a film on the teeth, and will then permeate into the enamel layer. This problem occurs over many years, imparting a noticeable discoloration of the enamel layer.

[0004] There have been numerous methods in the prior art relating to teeth whitening, including brushing the teeth using dentifrices containing an effective oxidizing agent such as peroxide. These types of compositions are disclosed in U.S. Pat. No. 5,256,402. More recently, several over-the-counter teeth whitening systems have become available and have gained in popularity as an alternative cosmetic treatment to teeth whitening procedures conducted by a professional. One such product is comprised of a thin strip of plastic film that has a tooth whitening composition applied to the surface as described in U.S. Pat. Nos. 5,894,017, 5,891,453 and 6,045,811. In addition, U.S. Pat. No. 6,419,906 B1 describes a flexible film which when applied to stained teeth is hydrated by saliva and is effective in such form to whiten teeth. The film comprises an anhydrous water hydratable ethylene oxide polymer matrix containing a solid peroxide whitening agent whereby, upon placing and positioning on stained teeth, the peroxide is solubilized and activated by the saliva present in the oral cavity. These aforementioned systems produce a whitening effect when applied to stained teeth; however, the strips must be removed after a specified period of time. U.S. patent application Ser. No. 09/931,319 teaches the administration of pharmaceutically active compounds using a multi-layered mucoadhesive erodible drug delivery device. Although this reference relates to an oral pharmaceutical application unrelated to teeth whitening, one important teaching is that the length of time the device remains on the mucosal surface before complete erosion, the "residence time", is easily modified by alterations of the backing layer. It is this teaching that will be utilized and adapted to the present invention relating to an erodible tooth-whitening strip. In the area of cosmetic dentistry, there is an ongoing need to improve the whitening efficiency and to provide more user-friendly over-the-counter products.

SUMMARY OF THE INVENTION

[0005] One object of the present invention is to provide a novel, cost-effective, erodible, layered device that adheres to

the moist surfaces of teeth and delivers an active agent for a controlled period of time. Another object of the present invention is to provide a convenient, user-friendly, erodible, layered device that adheres to the moist teeth surfaces and delivers a tooth whitening agent to the underlying stained surfaces. A further object of this invention is to provide a tooth whitening device that is easily applied without breaking or leaving any unwanted residue on the hands. A further object of the present invention is to provide a flexible, layered device that conforms and adheres intimately and securely to the entire tooth surface, minimizing the exposure of any excess whitening agent to the surrounding gums as found with other competitive products.

[0006] The composition of the bi-layered and multi-layered devices consists of an enamel adherent, water soluble, polymeric layer containing a tooth whitening agent or other active compound and a coated, erodible backing layer that controls the desired residence time. Since the devices of the current invention can provide a longer contact time with a stained tooth surface before eroding, it is expected that lower and safer amounts of whitening agents can be used to accomplish similar or superior results than attained by other commercial products.

[0007] An important aspect of the present invention is an erodible multilayered strip comprising at least two layers, a first layer comprises a water soluble polymer or combination of polymers that adheres to moist enamel surfaces. A second layer is water erodible and controls the residence time that the strip remains adhere to the enamel surface. This erodible strip is preferably shaped to conform to an individual tooth or a row of teeth.

[0008] An important embodiment of the present invention involves erodible adhesive a mucoadhesive, erodible multi-layered device comprising a first, water-soluble adhesive layer to be placed in contact with a mucosal surface and a second, water-erodible non-adhesive backing layer that controls residence time of the device. The first layer preferably comprises a tooth-whitening agent at least one water-soluble film-forming polymer in combination with at least one mucoadhesive polymer; and said second, water-erodible non-adhesive backing layer comprises a precast film containing at least one of hydroxypropyl methylcellulose, hydroxyethyl cellulose, hydroxypropyl cellulose, polyvinyl alcohol, polyethylene glycol, polyethylene oxide, and ethylene oxide-propylene oxide co-polymer, said backing layer being coated with at least one hydrophobic polymer, alone or in combination with at least one hydrophilic polymer, such that the backing layer is bioerodible.

[0009] An important aspect of the present invention is a mucoadhesive, erodible multi-layered device comprising a first, water-soluble adhesive layer to be placed in contact with a mucosal surface and a second, water-erodible non-adhesive backing layer that controls residence time of the device. The first layer comprises a tooth-whitening agent (most preferably carbamide peroxide), at least one water-soluble film-forming polymer in combination with at least one mucoadhesive polymer. Said second, water-erodible non-adhesive backing layer comprises a precast film containing at least one of hydroxypropyl methylcellulose, hydroxyethyl cellulose, hydroxypropyl cellulose, polyvinyl alcohol, polyethylene glycol, polyethylene oxide, and ethylene oxide-propylene oxide co-polymer. This backing layer

is coated with at least one hydrophobic polymer, alone or in combination with at least one hydrophilic polymer, such that the backing layer is bioerodible. The second water-erodible non-adhesive backing layer acts as a casting and support surface on which the adhesive layer is prepared. It preferably, and comprises a premade film of hydroxypropyl methyl cellulose in combination with a coating consisting of at least one hydrophobic polymer selected from the family of quaternary ammonium acrylate/methacrylate co-polymers, (Eudragit RS) ethyl cellulose and methyl cellulose, alone or in combination with at least one hydrophilic polymer, selected from the group consisting of polyvinyl pyrrolidone, hydroxypropyl methylcellulose, hydroxyethyl cellulose, hydroxypropyl cellulose, and polyvinyl alcohol.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0010] In the present invention, a unique, erodible, layered device that adheres to tooth enamel surfaces is provided. The device is most applicable for the cosmetic treatment of stained teeth, by delivering a whitening agent or combination of agents thereof for a controlled period of time. The device can also be used for the delivery of fluoride ions and phosphates for the preventative treatment of caries and tartar accumulation, respectively.

[0011] The device initially adheres to a moist tooth surface due to the hydration and partial solubilization of the water soluble polymer layer. The whitening agent that is dispersed throughout this polymeric layer is then activated as it comes in contact with saliva and is released to the underlying surface. The erosion rate of the device is controlled by the coated backing layer, which affects the amount of time the whitening agent remains in contact with the enamel surface. The main purpose of the backing layer is to slow down the dissolution of the water-soluble polymeric layer containing a whitening agent, and therefore maximizing the direct contact time and unidirectional delivery to the tooth surface. The composition of the backing layer is easily adjusted to provide variable erosion rates from one half hour to several hours. The layered device is essentially totally erodible, and therefore does not require removal after the appropriate treatment time.

[0012] The Residence Time as defined above is difficult to quantitatively ascertain. One visual method is to apply the layered device to the teeth surface and periodically observe the covered surface using a mirror and assess approximately how much residue remains on the surface. Typically, as the backing layer erodes away at a predetermined rate, the adhesive swells and starts to dissolve and fall off the teeth surface. The actual residence time on each surface is controlled primarily by the flow of saliva to the surface and any friction created by interaction with the internal surface of the lips.

[0013] The polymeric coating layer that adheres to the tooth enamel is composed of one or more adhesive polymers, an appropriate whitening agent and a plasticizer. This coating may also contain an antioxidant, a preservative and a taste-masking flavor.

[0014] The adhesive polymers can be any water soluble, FDA approved polymer for oral applications that sticks to an enamel surface when in contact with a moist tooth surface. The adhesive polymers may comprise hydroxyethyl cellu-

lose, hydroxypropyl cellulose, hydroxypropylmethyl cellulose, hydroxyethylmethyl cellulose, sodium carboxymethyl cellulose, polyvinyl pyrrolidone, polyvinyl alcohol, polyethylene glycol, polyacrylic acid, polyethylene oxide, alone or in combination thereof. The preferred adhesive polymers are hydroxyethyl cellulose and polyvinyl pyrrolidone since they exhibit rapid and effective adhesion to enamel when in contact with a moist tooth surface.

[0015] The molecular weight of the adhesive polymer is also important, since it must be large enough so that an integral film can form, but not so large that immediate interfacial solubilization and adhesion to the enamel surface is impaired. Typical average molecular weights range between 50,000 and 1,500,000 Daltons, and preferably between 50,000 and 500,000.

[0016] The whitening agents suitable for the practice of the present invention include peroxides, metal chlorites, perborates, percarbonates, peroxyacids, persulfates, alone or in combination thereof. Suitable peroxide compounds include hydrogen peroxide, carbamide peroxide, calcium peroxide, and mixtures thereof. The preferred peroxide is carbamide peroxide. Suitable metal chlorites include calcium chlorite, barium chlorite, magnesium chlorite, lithium chlorite, sodium chlorite, and potassium chlorite. The preferred chlorite is sodium chlorite. A preferred percarbonate is sodium percarbonate, and the preferred persulfates are oxones.

[0017] The rate at which the whitening agent is solubilized and subsequently released to a tooth surface is controlled by varying the film thickness, polymer properties such as structure and molecular weight, type and properties of whitening agent and the concentration of the whitening agent. The concentration of the whitening agent typically varies from about 0.1% to about 30% by weight of the total layered device, and preferably from about 0.5% to about 20% by weight.

[0018] A plasticizer useful for purposes of the present invention is selected from glycols such as propylene glycol, polyethylene glycol, polyhydric alcohols such as glycerin and sorbitol and glycerol esters such as glycerol triacetate. The plasticizer comprises about 0.2% to about 30% by weight of the film of the present invention and preferably about 0.5% to about 10% by weight.

[0019] Glycerin and propylene glycol are the preferred plasticizers for use in the present invention as well as polyethylene glycol. The preferred molecular weights for polyethylene glycol are in the range of 200-600 Daltons.

[0020] A colorant or opacifier can be incorporated in the adhesive layer or any of the layers of this device for use as an appearance enhancer. The colorant or opacifier comprises about 0.01% to about 10% by weight of the film of the present invention and preferably about 0.03% to about 1% by weight. Colors and opacifiers may also be used to help distinguish the non-adhesive backing layer from the enamel adhering layer. Some opacifiers include titanium dioxide, zinc oxide, zirconium silicate and others.

[0021] In addition to the incorporation of whitening agents, a plasticizer, and colorants, there may also be included in the adhesive film matrix a minor amount, e.g., 0.01 to 2% by weight, of ingredients such as preservatives, antioxidants, and flavors.

[0022] The backing layer solution is composed of a mixture of a hydrophobic polymer, such as ethyl cellulose, methyl cellulose, propyl cellulose, or other related polymers and copolymers, anionic, cationic and neutral polymers and copolymers of methyl methacrylate under the trade name EUDRAGIT®, and a water soluble polymer such as polyvinyl pyrrolidone, hydroxypropylmethyl cellulose, hydroxyethyl cellulose, hydroxypropyl cellulose, polyvinyl alcohol or any other water soluble polymer that can be completely commixed with the hydrophobic polymer(s), dissolved in ethanol or other suitable organic solvent. The ratio of the hydrophobic to the hydrophilic polymer is adjusted to increase or decrease the desired residence time that the device remains on the teeth before complete erosion. The ratio of hydrophobic to hydrophilic polymer ranges from 0.5:1 to 10:1 by weight, and more preferably 1.5:1 to 3:1 by weight.

[0023] The backing layer solution may also contain a plasticizing agent, such as propylene glycol, polyethylene glycol, or glycerin, in a small amount, 0.1 to 2.0% by weight, in order to improve the flexibility and conformability of the resultant layered film and to adjust the erosion rate of the device. Colors and opacifiers may also be added to help distinguish the non-adhesive backing layer from the enamel adhering layer.

[0024] Once dissolved, these solutions (adhesive and backing) are cast and processed into a thin film by techniques known in the art, such as by film dipping, film coating, film casting, spin coating, or spray drying. These films are produced on an appropriate support at the desired thickness and dried using an oven. The primary support can be a polymer-coated paper, Mylar or any other appropriate non-deformable and impervious surface. The preferable primary support is coated paper. The primary support's casting surface must hold the film dimensionally stable during the coating and drying processes, but allow the resulting composite film to release when desired. The actual casting surface for these solutions may be the primary support or another layer of the device being produced, such as the precast film layer or a freshly cast adhesive or backing layer. The amount of coating solutions applied, using a suitable doctor blade or lab coater apparatus, ranges between 0.01 to 1.5 mm, and most preferably between 0.05 and 0.4 mm for the backing layer and between 0.8 and 1.3 mm for the adhesive layer. The amount of solids present in the coating solutions, the resulting solution viscosity and coating thickness applied determine the amount of coating film to be deposited on the casting surface.

[0025] The final layered device will consist of an adhesive layer and a hydrophobic layer with or without a precast hydroxypropylmethyl cellulose (HPMC) film in-between. A precast water soluble film between the adhesive and backing layers will typically provide a longer residence time on the teeth. Several methods of forming this device are now provided herein.

[0026] In one embodiment, the adhesive layer is formed on an appropriate primary support. In a separate operation, the backing layer is formed on a water soluble, polymeric precast film of HPMC. The two films are then laminated, with the hydrophobic layer either on the outside or in the middle of the final composite film, using an appropriate binding solution such as polyvinylpyrrolidone dissolved in a

water/ethanol mixture. This multi-layered film can be either peeled away from the primary support and cut into the desired shape or cut with the primary support still attached.

[0027] In another embodiment, the backing layer is formed on an appropriate primary support. A precast film of HPMC is then laminated to the backing layer using binding solution consisting of polyvinylpyrrolidone dissolved in a water/ethanol mixture. Then a distinct binding layer, typically composed of polyvinylpyrrolidone is formed on top of the HPMC precast film. Finally, the adhesive layer is formed on top of the binding layer. This resulting multi-layer film is then further processed as outlined above.

[0028] In a preferred embodiment, the adhesive layer is formed on an appropriate primary support by the casting methods previously described. The backing layer is then formed directly on top of the adhesive layer. This two-layer film is then further processed as outlined above.

[0029] In another preferred embodiment, the backing layer is formed on an appropriate primary support by the casting methods previously described. The adhesive layer is then formed directly on top of the backing layer and the resulting bilayered product is further processed as outlined above.

[0030] The thicknesses of each layer will affect the residence time of the device. The hydrophobic layer composition and thickness are the most important parameters in controlling the residence time. However, inclusion of the water soluble, polymeric precast film as one of the layers of the device will also increase the residence time, since the overall thickness of the device is increased.

[0031] The total thickness of the device is also an important consideration in regards to user acceptance. A very thick device becomes more noticeable with respect to "mouth feel", and may cause the user to discontinue its use prematurely, thus compromising efficacy.

[0032] The total thickness of the device will also affect its ability to conform and adhere to teeth in an efficient manner. Typically, thin films are preferred since they can be easily applied and bent around the teeth, minimizing the amount of unattached area in the form of edges and corners that could cause the film to be accidentally pulled off the teeth. However, if the film is too thin, it will begin to lose tensile strength and rip during its application.

[0033] With respect to the individual layers of the composite film, the thickness of the adhesive layer is between 50 μ and 300 μ , and more preferably between 60 μ and 140 μ . The thickness of the backing layer is between 50 μ and 300 μ , and more preferably between 60 μ and 100 μ . The thickness of the precast layer if used to produce a multilayered device is between 25 μ and 200 μ , and more preferably between 50 μ and 100 μ . The overall thickness of the device is between 75 μ and 500 μ , and more preferably between 125 μ and 300 μ .

EXAMPLE 1

[0034] A 180.0 gram batch of placebo adhesive solution was prepared using 10.0 grams hydroxyethyl cellulose (Natrosol 250L NF; Hercules), 10.0 grams polyvinyl pyrrolidone (PVP; Povidone P-1416; Spectrum), 0.65 grams sodium benzoate (Spectrum), 0.65 grams propylene glycol (Spectrum), and 158.7 grams deionized and 0.22 μ -filtered water. This solution was used in Example 11 below.

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIRECCION DE NUEVAS CREACIONES

2020
Bogotá, D.C.

Abogado
✓ **JUAN PABLO CADENA SARMIENTO**

ASUNTO	Radicación	06117705
	Trámite	011
	Evento	376
	Actuación	411 2236
	Oficio	
	Folios	007

Patente de Invención ☒ Patente de Modelo de Utilidad ☐

Vía Nacional ☐

Vía PCT (fase nacional) ☒ Cap.I ☐ Cap. II ☒

No. Sol. Internacional PCT/US2005/016165

Fecha de Presentación Internal.

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

1. Documentos estudiados

- 1.1. Descripción: Folios: 35 a 57 como se radicó inicialmente
- 1.2. Reivindicaciones: Folios: 58 a 62 como se radicó inicialmente
- 1.3. Prioridad: 10/05/2004, US,10/842,152

Título de la invención: **BANDAS MULTIPLACAS BLANQUEADORAS DE DIENTES.**

Problema Técnico Planteado: Necesidad de nuevos sistemas para aplicar a los dientes productos blanqueadores basados en peróxidos (folio 35, pg1)

Solución: una película blanqueadora para recubrir dientes, caracterizada porque comprende: polímero formador de película, agente blanqueador, cubierta hidrofóbica, cubierta adherente (reiv 1, folio 58, pg 24).

IPC: A61K7/16.

2. De la solicitud de Patente

2.1. Reivindicaciones (artículo 30 D 486)

La reivindicación 16, depende de una reivindicación de método de tratamiento (reivindicación 12); la dependencia debería ser con la reivindicación 1; pero de todas maneras, la materia reclamada en esta, es la misma materia que se reclama en la reivindicación 5.

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

Las reivindicaciones 12-15 y 17-22, se refieren a un método de tratamiento, por lo de acuerdo al presente artículo no son patentables.

4. 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: 10/05/2004.

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*
D1	US2004/0062724	Erodible film for treating the surfaces of teeth	Abril 1 de 2004

D1 (folios: 101-104)

5. Análisis de patentabilidad (artículo 14 D486)

5.1 Novedad (artículo 16 D486)

La reivindicación 1, se refiere a una película blanqueadora para recubrir dientes, caracterizada porque comprende:

- a) polímero formador de película.
- b) Agente blanqueador
- c) Cubierta hidrofóbica
- d) Cubierta adherente

Las características esenciales de la composición de la reivindicación 1, es decir: polímero formador de película, agente blanqueador, cubierta hidrofóbica, cubierta adherente, ya se divulgan en D1, que da conocer un dispositivo multicapas que se adhiere a la superficie de los dientes (abstract, folio 101 y folio 102, párrafos 5 y 6), que comprende: un polímero formador de película (folio 103, pg 2, párrafo 14), un agente blanqueador (folio 103, pg 2, párrafo 16), una cubierta hidrofóbica (folio 104, pg 3, párrafo 22) y una cubierta adherente (folio 104, pg 3, párrafo 26).

Por lo cual, la presente reivindicación, no se considera nueva, como tampoco sus dependientes 2-11.

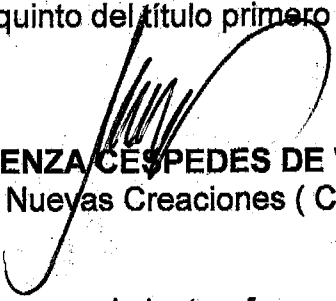
6. Conclusión:

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

N°	Documento N°	Reivindicaciones afectadas	Requisito que afecta
D1	US2004/0062724	1-11	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 sesenta días contados a partir de la fecha de notificación de la presente comunicación. En caso de no dar respuesta al presente requerimiento, o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente.

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


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

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

19 Feb. 2010

CONCEPTO TÉCNICO No.258	EXAMINADOR TÉCNICO Código No.202078
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