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COLGATE-PALMOLIVE COMPANY

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NEW YORK, NEW YORK, ESTADOS UNIDOS DE AMERICA

74. APODERADO

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22. SANTAFE DE BOGOTA, D.C.

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1

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Capítulo II

2

**SOLICITANTE
(71)**

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CC ☐ NIT ☐
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Cual _____
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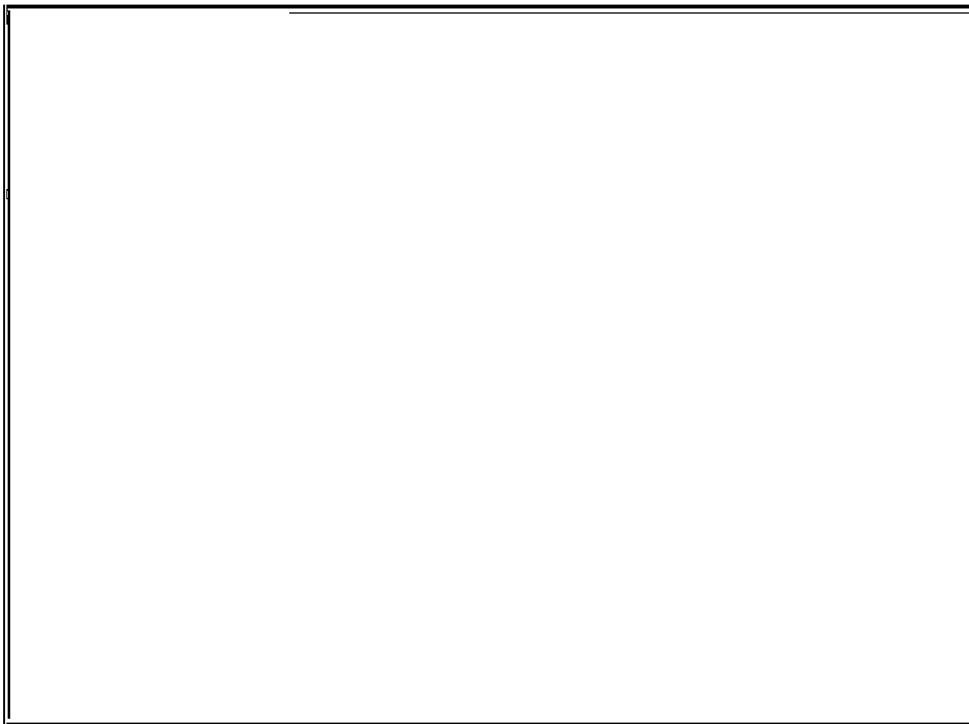
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ANEXOS

- ☒ Comprobante de pago de la tasa de presentacion de la solicitud \$443 000
- ☒ Documento que acredita la existencia y representacion legal cuando el solicitante sea persona juridica
- ☒ Poderes si fuere el caso **Fotocopia autenticada**
- ☐ Documento de cesion del inventor al solicitante o a su causante
- ☐ Declaraciones
- ☒ Copia de la solicitud internacional (Resumen, descripcion reivindicaciones dibujos)
- ☒ Traduccion de la solicitud internacional al castellano (Resumen descripcion reivindicaciones dibujos)
- ☐ Copia del examen preliminar efectuado por la IPEA
- ☐ Traducción del examen preliminar efectuado por la IPEA
- ☐ De ser el caso copia del contrato de acceso
- ☐ De ser el caso documento que acredite la licencia o autorizacion de uso de conocimientos tradicionales de las comunidades indigenas.
- ☐ De ser el caso certificado de deposito del material biologico
- ☐ Arte final 12x12
- ☐ De ser el caso informacion sobre otras solicitudes de patente o titulos obtenidos en el extranjero por el mismo titular o su causante relacionadas parcial o totalmente con la invencion de esta solicitud
- ☒ Otros Tarjeta de Propietarios

11 FIGURA CARACTERÍSTICA



12 Solicito la concesión de la patente,

NOMBRE: JUAN PABLO CADENA SARMIENTO

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(54) Title: COSMETIC TREATMENT OF XEROSIS

(57) Abstract: A method for decreasing the level of skin ashiness in an individual with xerosis and having a Fitzpatrick type 4 or higher score comprising topically applying to the skin of said individual a composition (a) having a cleansing surfactant or mixture of cleansing surfactants in quantity sufficient to cleanse the skin and (b) a moisturizing component or mixture of components in quantities sufficient to decrease the level of said skin ashiness.

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COSMETIC TREATMENT OF XEROSIS

METHOD OF USEBACKGROUND OF THE INVENTION

5 Dry skin is one of the most common skin conditions manifested by persons of both sexes and all ages. Dry skin is initially observed as an increase in the number of desquamated comeocytes present on the skin surface. These comeocytes appear as white dander on the skin of Caucasian individuals, but do not represent a significant cosmetic concern, since the background skin color is also light. This is not the case in persons with darker colored skin types, such as Fitzpatrick types 4 or higher. Dry skin in darker pigmented individuals is known as ashen skin, since the pigmented skin scale appears gray, due to the presence of increased melanin in the desquamating comeocytes. Dry ashen skin, medically known as xerosis, is the result of decreased water content of the stratum comeum, which leads to abnormal desquamation of comeocytes.

A new method has been discovered which provides a non-invasive, objective measurement of comeocyte scale of people with xerosis. Compositions for treating people with xerosis can be readily evaluated using this test. In this manner, a composition has been found which effectively treats people with xerosis, ashen skin of those people having a Fitzpatrick type 4 or higher. This composition is not only effective during topical application but even has a residual effect after application of the composition is withdrawn from use.

SUMMARY OF THE INVENTION

A method for decreasing the level of skin ashiness in an individual with xerosis and having a Fitzpatrick type 4 or higher score comprising topically applying to the skin of said individual a composition having a cleansing surfactant or mixture of cleansing surfactants in quantity sufficient to cleanse the skin and a moisturizing component or mixture of components in quantities sufficient to decrease the level of said skin ashiness.

A further aspect of the invention is a method for assessing the presence of ashen skin on an individual having xerosis and a Fitzpatrick type 4 or higher score which comprises scraping the skin of said individual, collecting the loose dander accumulated, and counting the number of comeocytes.

DETAILED DESCRIPTION OF INVENTION

Ashen skin is a term used to describe the grayish white powdery appearance of the skin having darker color skin type, such as having Fitzpatrick type 4 or higher, for example black individuals. As stated previously, because of the contrast in colors, ashen skin is a significant cosmetic issue in people with dark skin. The new test system disclosed here allows a quantitative and qualitative assessment of ashen skin because the desquamating corneocytes can now be analyzed both quantitatively and qualitatively. This can be accomplished in a simple manner by scraping the skin, collecting the scrapings and visually observing and/or observing through a dissecting microscope the desquamating corneocytes in a quantitative manner and a qualitative manner. Through this procedure, the efficacy of skin formulations can now be readily assessed for their effect on skin. These formulations can be assessed for their effect on normal skin to see if the formulation brings about ashen skin or the effect of a formulation on individuals who have ashen skin. Up until now, the state of the art system for evaluating the status of ashen skin was to make visual observation of the ashen skin. The skin scraping method presently disclosed provides a more thorough qualitative examination of the corneocytes and permits an accurate quantitative counting of the corneocytes.

Compositions which can have a positive effect on xerosis can now be evaluated utilizing this new and improved system. Moisturizing systems can be evaluated under this new system. A topical formation has been found which can be utilized in the managing of ashen skin. Interestingly, not only is skin ashiness reduced but there is also a measurable reduction in skin dryness and skin roughness. With the formulations, the positive effects are maintained for at least one week after termination of the application. This shows that there is a residual effect as well. The formulation is a rinse-off skin cleansing formulation comprising (a) at least one cleansing surfactant or a mixture of cleansing surfactants in quantities sufficient to cleanse the skin, (b) a hydrocarbonaceous substance in quantities sufficient to bring about reduction of skin ashiness in individuals having xerosis, the reduction as measured by a scraping test. The composition is rinsed from the skin with water after use in a time period of less than one minute, preferably less than 45, 30 or 15 seconds after application. This is in contrast to a lotion or cream (leave on composition) which is left on the skin as long as possible.

Any cleansing surfactant can be employed in the cleansing composition.

Cleansing surfactants which can be employed include: Soap, a long chain alkyl or alkenyl, branched or normal carboxylic acid salt such as sodium, potassium, ammonium or substituted ammonium salt, can be present in the composition as an example of an anionic surfactant. Exemplary of long chain alkyl or alkenyl are from about 8 to about 22 carbon atoms in length, specifically about 10 to about 20 carbon atoms in length, more specifically alkyl and most specifically normal, or normal with little branching. Small quantities of olefinic bond(s) may be present in the predominantly alkyl sections, particularly if the source of the "alkyl" group is obtained from a natural product such as tallow, coconut oil and the like.

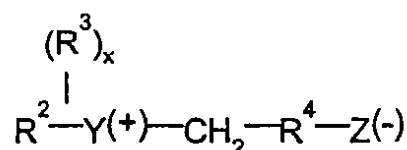
Other cleansing surfactants can be present in the composition as well. Examples of such surfactants are the anionic, amphoteric, nonionic and cationic surfactants. Examples of anionic surfactants include but are not limited to soaps, alkyl sulfates, anionic acyl sarcosinates, methyl acyl taurates, N-acyl glutamates, acyl isethionates, alkyl sulfosuccinates, alkyl phosphate esters, ethoxylated alkyl phosphate esters, trideceth sulfates, protein condensates, ethoxylated alkyl sulfates and the like.

Alkyl chains for these surfactants are C_8 - C_{22} , preferably C_{10} - C_{18} , more preferably C_{12} - C_{14} .

Anionic non-soap surfactants can be exemplified by the alkali metal salts of organic-sulfate having in their molecular structure an alkyl radical containing from about 8 to about 22 carbon atoms and a sulfonic acid or sulfuric acid ester radical (included in the term alkyl is the alkyl portion of higher acyl radicals). Preferred are the sodium, ammonium, potassium or triethanolamine alkyl sulfates, especially those obtained by sulfating the higher alcohols (C_8 - C_{18} carbon atoms), sodium coconut oil fatty acid monoglyceride sulfates and sulfonates; sodium or potassium salts of sulfuric acid esters of the reaction product of 1 mole of a higher fatty alcohol (e.g., tallow or coconut oil alcohols) and 1 to 12 moles of ethylene oxide; sodium or potassium salts of alkyl phenol ethylene oxide ether sulfate with 1 to 10 units of ethylene oxide per molecule and in which the alkyl radicals contain from 8 to 12 carbon atoms, sodium alkyl glyceryl ether sulfonates; the reaction product of fatty

acids having from 4 to 22 carbon atoms esterified with isethionic acid and neutralized with sodium hydroxide; water soluble salts of condensation products of fatty acids with sarcosine; and others known in the art.

Zwitterionic surfactants can be exemplified by those which can be broadly described as derivatives of aliphatic quaternary ammonium, phosphonium, and sulfonium compounds, in which the aliphatic radicals can be straight chain or branched and wherein one of the aliphatic substituents contains from about 8 to 18 carbon atoms and one contains an anionic water-solubilizing group, e.g., carboxy, sulfonate, sulfate, phosphate, or phosphonate. A general formula for these compounds is:



wherein R^2 contains an alkyl, alkenyl, or hydroxy alkyl radical of from about 8 to about 18 carbon atoms, from 0 to about 10 ethylene oxide moieties and from 0 to 1 glyceryl moiety; Y is selected from the group consisting of nitrogen, phosphorus, and sulfur atoms; R^3 is an alkyl or monohydroxyalkyl group containing 1 to about 3 carbon atoms; X is 1 when Y is a sulfur atom and 2 when Y is a nitrogen or phosphorus atom, R^4 is an alkylene or hydroxyalkylene of from 0 to about 4 carbon atoms and Z is a radical selected from the group consisting of carboxylate, sulfonate, sulfate, phosphonate, and phosphate groups.

Examples include: 4-[N,N-di(2-hydroxyethyl)-N-octadecylammonio]-butane-1-carboxylate; 5-[S-3-hydroxypropyl-S-hexadecylsulfonio]-3 hydroxypentane-1-sulfate; 3-[P,P-P-diethyl-P 3,6,9 trioxatetradecyl- phosphonio]-2-hydroxypropane-1-phosphate; 3-[N,N-dipropyl-N-3 dodecoxy-2-hydroxypropylammonio]-propane-1-phosphonate; 3-(N,N-di- methyl-N-hexadecylammonio) propane-1-sulfonate; 3-(N,N-dimethyl-N-hexadecylammonio)-2-hydroxypropane-1-sulfonate; 4-(N,N-di(2-hydroxyethyl)-N-(2 hydroxydodecyl) ammonio]-butane-1-carboxylate; 3-[S-ethyl-S-(3-dodecoxy-2-hydroxypropyl)sulfonio]-propane-1-phosphate; 3-(P,P-dimethyl-P-dodecylphosphonio)-propane-1-phosphonate; and 5-[N,N-di(3-hydroxypropyl)-N-hexadecylammonio]-2-hydroxy-pentane-1-sulfate.

Examples of amphoteric surfactants which can be used in the compositions of the present invention are those which can be broadly described as derivatives of aliphatic secondary and tertiary amines in which the aliphatic radical can be straight chain or branched and wherein one of the aliphatic substituents contains from about 8 to about 18 carbon atoms and one contains an anionic water solubilizing group, e.g., carboxy, sulfonate, sulfate, phosphate, or phosphonate. Examples of compounds falling within this definition are sodium 3-dodecylaminopropionate, sodium 3-dodecylaminopropane sulfonate, N-alkyltaurines, such as the one prepared by reacting dodecylamine with sodium isethionate according to the teaching of U.S. Patent No. 2,658,072, N-higher alkyl aspartic acids, such as those produced according to the teaching of U.S. Patent No. 2,438,091, and the products sold under the trade name "Miranol" and described in U.S. Patent No. 2,528,378. Other amphoterics such as betaines are also useful in the present composition.

Examples of betaines useful herein include the high alkyl betaines such as coco dimethyl carboxymethyl betaine, lauryl dimethyl carboxy-methyl betaine, lauryl dimethyl alpha-carboxyethyl betaine, cetyl dimethyl carboxymethyl betaine, lauryl bis-(2-hydroxyethyl)carboxy methyl betaine, stearyl bis-(2-hydroxypropyl) carboxymethyl betaine, oleyl dimethyl gamma-carboxypropyl betaine, lauryl bis-(2-hydroxypropyl) alpha-carboxyethyl betaine, etc. The sulfobetaines may be represented by coco dimethyl sulfopropyl betaine, stearyl dimethyl sulfopropyl betaine, amido betaines, amidosulfobetaines, and the like.

Many cationic surfactants are known to the art. By way of example, the following may be mentioned:

- stearyldimethylbenzyl ammonium chloride;
- dodecyltrimethylammonium chloride;
- nonylbenzylethyldimethyl ammonium nitrate;
- tetradecylpyridinium bromide;
- laurylpyridinium chloride;
- cetylpyridinium chloride
- laurylpyridinium chloride;
- laurylisoquinolium bromide;
- ditallow(Hydrogenated)dimethyl ammonium chloride;

- dimethyl ammonium chloride; and
- stearalkonium chloride.

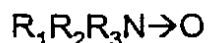
Nonionic surfactants include those which can be broadly defined as compounds produced by the condensation of alkylene oxide groups (hydrophilic in nature) with an organic hydrophobic compound, which may be aliphatic or alkyl aromatic in nature. Examples of preferred classes of nonionic surfactants are:

1. The polyethylene oxide condensates of alkyl phenols, e.g., the condensation products of alkyl phenols having an alkyl group containing from about 6 to 12 carbon atoms in either a straight chain or branched chain configuration, with ethylene oxide, the said ethylene oxide being present in amounts equal to 10 to 60 moles of ethylene oxide per mole of alkyl phenol. The alkyl substituent in such compounds may be derived from polymerized propylene, diisobutylene, octane, or nonane, for example.

2. Those derived from the condensation of ethylene oxide with the product resulting from the reaction of propylene oxide and ethylene diamine products which may be varied in composition depending upon the balance between the hydrophobic and hydrophilic elements which is desired. For example, compounds containing from about 40% to about 80% polyoxyethylene by weight and having a molecular weight of from about 5,000 to about 11,000 resulting from the reaction of ethylene oxide groups with a hydrophobic base constituted of the reaction product of ethylene diamine and excess propylene oxide, said base having a molecular weight of the order of 2,500 to 3,000, are satisfactory.

3. The condensation product of aliphatic alcohols having from 8 to 18 carbon atoms, in either straight chain or branched chain configuration with ethylene oxide, e.g., a coconut alcohol ethylene oxide condensate having from 10 to 30 moles of ethylene oxide per mole of coconut alcohol, the coconut alcohol fraction having from 10 to 14 carbon atoms. Other ethylene oxide condensation products are ethoxylated fatty acid esters of polyhydric alcohols (e.g., Tween 20-polyoxyethylene (20) sorbitan monolaurate).

4. Long chain tertiary amine oxides corresponding to the following general formula:



wherein R₁ contains an alkyl, alkenyl or monohydroxy alkyl radical of from about 8 to about 18 carbon atoms, from 0 to about 10 ethylene oxide moieties, and from 0 to 1 glyceryl moiety, and, R₂ and R₃ contain from 1 to about 3 carbon atoms and from 0 to about 1 hydroxy group, e.g., methyl, ethyl, propyl, hydroxy ethyl, or hydroxy propyl radicals. The arrow in the formula is a conventional representation of a semipolar bond. Examples of amine oxides suitable for use in this invention include dimethyldodecylamine oxide, oleyl-di(2-hydroxyethyl) amine oxide, dimethyloctylamine oxide, dimethyldecylamine oxide, dimethyl-tetradecylamine oxide, 3,6,9 trioxaheptadecyldiethylamine oxide, di(2-hydroxyethyl)-tetradecylamine oxide, 2-dodecoxyethyldimethylamine oxide, 3-dodecoxy-2-hydroxypropyldi(3-hydroxypropyl)amine oxide, dimethyl- hexadecylamine oxide.

5. Long chain tertiary phosphine oxides corresponding to the following general formula:



wherein R contains an alkyl, alkenyl or monohydroxyalkyl radical ranging from 8 to 20 carbon atoms in chain length, from 0 to about 10 ethylene oxide moieties and from 0 to 1 glyceryl moiety and R' and R'' are each alkyl or mono-hydroxyalkyl groups containing from 1 to 3 carbon atoms. The arrow in the formula is a conventional representation of a semipolar bond. Examples of suitable phosphine oxides are: dodecyldimethylphosphine oxide, tetra-decylmethylethylphosphine oxide, 3,6,9-trioxaoctadecyldimethylphosphine oxide, cetyldimethylphosphine oxide, 3-dodecoxy-2-hydroxypropyldi(2-hydroxyethyl) phosphine oxide, stearyldimethylphosphine oxide, cetylethyl propylphosphine oxide, oleyldiethylphosphine oxide, dodecyldiethylphosphine oxide, tetra-decyldiethylphosphine oxide, dodecyldipropylphosphine oxide, dodecyl-di(hydroxymethyl)phosphine oxide, dodecyldi(2-hydroxyethyl)phosphine oxide, tetradecylmethyl-2-hydroxypropylphosphine oxide, oleyldimethylphosphine oxide, 2-hydroxydodecyldimethylphosphine oxide.

6. Long chain dialkyl sulfoxides containing one short chain alkyl or hydroxy alkyl radical of 1 to about 3 carbon atoms (usually methyl) and one long hydrophobic chain which contain alkyl, alkenyl, hydroxy alkyl, or keto alkyl radicals containing from about 8 to about 20 carbon atoms, from 0 to about 10 ethylene oxide moieties and from 0 to 1 glyceryl moiety. Examples include: octadecyl methyl sulfoxide, 2-ketotridecyl methyl sulfoxide, 3,6,9-trioxaoctadecyl 2-hydroxyethyl sulfoxide, dodecyl methyl sulfoxide, oleyl 3-hydroxypropyl sulfoxide, tetradecyl methyl sulfoxide, 3-methoxytridecylmethyl sulfoxide, 3-hydroxytridecyl methyl sulfoxide, 3-hydroxy-4-dodecoxybutyl methyl sulfoxide.

7. Alkyl polyglycosides wherein the alkyl group is about 10 to about 20 carbon atoms, preferably about 10 to about 18 carbon atoms and the degree of polymerization of the glycoside is from about 1 to about 3, preferably about 1.3 to about 2.0.

Since dry ashen skin, xerosis, seems to be the result of decreased water content of the stratum corneum which leads to abnormal desquamation of corneocytes, the presence of a hydrocarbonaceous substance seems to bring alleviation of the problem through moisturization of the skin. Substances which bring about reduction of skin ashiness include long chain alkanes, long chain alkenes, mineral oils, petrolatum, polyalpha olefins, microcrystalline waxes, paraffin wax, beeswax and natural waxes derived from vegetables and mixtures thereof.

Other materials can also be in the composition as well. Examples of these components are coloring agents, UV stabilizers, antibacterial agents, thickeners, gelling agents, additional emollients and the like. Preferred

components for reasons including as additional skin feel include cationic polymers. Examples of such cationic materials include the various polyquats known to the art which include but are not limited to Polyquaternium 2 (a polyelectrolyte formed from quaternized ioenes), Polyquaternium 4 (hydroxycellulose diallyldimethyl ammonium chloride), Polyquaternium 5 (acrylamide/ β -methacryloxyethyltrimethyl ammonium methosulfate), Polyquaternium 6 and 7 (homopolymer of dimethyl diallyl ammonium chloride and the copolymer of dimethyl diallyl ammonium chloride with acrylamide), Polyquaternium 8 (methyl and stearyl dimethylaminoethyl methacrylate

quaternized with dimethylsulfate), Polyquaternium 10 (1-hydroxypropyl trimethyl ammonium chloride ethers of hydroxyethyl cellulose), Polyquaternium 11 (quaternized PVP and dimethylaminoethyl methacrylate), Polyquaternium 16 (copolymer of PVP/methyl vinylimidazoline), Polyquaternium 17 and 18

5 (polyelectrolyte formed from quaternized ioenes), Polyquaternium 19 (a vinyl alcohol hydroxypropyl amine salt), Polyquaternium 24 (polymeric quaternized ammonium salt of hydroxymethylcellulose and lauryl dimethyl ammonium substituted epoxide), Polyquaternium 27 (polyelectrolyte formed from quaternized ioenes). Other cationic materials include Polycare 133 (a polymethacrylamideopropyl trimonium chloride from Rhone-Poulenc). These materials are known to be the type that neutralizes a negative charge, such as on skin:

Further emollients include long chain saturated or unsaturated fatty acids
15 such as lauric, oleic, myristic, palmitic and stearic, cocoa butter, shea butter, lanolin, and silicones such as polydimethyl siloxane.

The physical form of the composition can be a solid such as a bar, a liquid or gel or a mousse, foam, aerosol or spray. The active portion of the aerosol spray ,
20 foam or mousse is generally a liquid or gel which has a separate delivery system. In a solid, the amount of cleansing surfactant is generally at least about 40, 50, or 60 wt. % with a maximum of no more than about 80, 85 or 92 wt. % of the composition. Generally, these are in the shape of a bar for skin cleansing. For the liquid or gel, a minimum of the skin cleansing surfactant or mixtures of surfactants is about 4 wt. %
25 of liquid or gel composition. Preferred minimums are about 6, 8, or 10 wt. %. For the maximum quantities, there is generally less than about 35, 25, 20 or 15 wt. %.

With respect to additional emollients when employed, there is a minimum of about 0.1 wt. %, 0.2, 0.4 or 0.5 wt. % of a solid composition and a maximum or no
30 more than about 8, 10 or 12 wt. % of the composition. With respect to a liquid or gel there is a minimum of about 0.05 wt. %, preferably about 0.1, 0.2, or 0.3 wt. %. A maximum of no more than about 25, 20, 15 or 10 wt. % can be employed.

Following is a description of the test method and the results using a soap bar having the following composition:

Component	Wt. %
Soap	78
Petrolatum	3.5
Silicone	0.1
Polyquat 6	0.12
Fragrance	1.0
Antioxidants, Preservatives, etc.	2.7
Water, q.s.	

Forty male or female subjects above the age of consent with Fitzpatrick skin types 4 or higher were enrolled in a 2-week study to determine the effect of a novel soap formulation on the reduction of the appearance of ashen skin. The subjects were soap users and possessed ashen skin indicating skin dryness, but no evidence of dermatitis or other skin disease. Subjects underwent a baseline skin assessment by an investigator, skin scrapings (described below) and conducted self skin assessments of ashen skin, roughness and dryness (Table 1). Skin scrapings were used to visually assess the amount of skin scales present.

Table 1
Assessment Scale for Ashen Skin,
Roughness and Dryness

Score	Assessment Definition
0	None
1	Mild Level
2	Moderate Level
3	Severe Level

All forty subjects were given the soap bar to use for one week. After one week of use, thirty (30) subjects remained on the above bar while ten (10) subjects switched back to their normal soap. The subjects were randomly assigned 10 subjects to Group A and 30 to Group B. In order to keep the study blinded, the medical investigator did not have knowledge of subject placement into the groups

until the end of the study. Subjects returned once a week at the end of Weeks 1 and 2 for evaluation of their skin condition.

Skin scrapings were used to visually assess the amount of skin scale present. The side of a microscope slide was gently stroked across the skin of the inner right forearm (3 cm below the antecubital fossa) ten times to collect loose dander. The number of corneocytes obtained was recorded, and the quality of the skin scale was assessed with the aid of a dissecting microscope. This provided a noninvasive, objective measurement of the amount of scale present on the skin surface.

Statistical Analysis

A paired t-test was used to assess the skin scrapings investigator and patient data for Baseline and Week 1 comparisons. A paired t-test was used to compare the Baseline and Week 2 data for the group of 30 subjects. In addition, a 2 sample unequal t-test was used when comparing the Group of 30 to the Group of 10 at the end of Week 2.

Results and Discussion

Skin Scale Scrapings

After one week of using the novel bar, there was a statistically significant reduction in the number of skin scales on the microscope slide (See Table 2).

Table 2

Week 1

Reduction in Skin Scales for Novel Soap Bar

	Baseline n = 40	Week 1 n = 40
Average Cell Count	18.88 ± 2.05	11.50 ± 1.56
Paired t-Test vs. Baseline		<0.001

For Week 2, the number of corneocytes continued to decrease for those remaining on the test bar (Table 3).

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Table 3
Week 2
Reduction in Skin Scales for Novel Soap Bar

	Baseline n = 30	Week 1 n = 30
Average Cell Count	12.03 ± 1.56	6.90 ± 0.81
Paired t-Test vs. Baseline		<0.001

For the subjects that returned to their normal product, there was an increase in skin scales (Table 4).

Table 4
Skin Scales Comparison at Week 2

Test Product	Novel Bar	Normal Bar
Assessment Parameter	Skin Scales	Skin Scales
Number of Subjects	n = 30	n = 10
Average Cell Count	6.90 ± 0.81	13.80 ± 1.32
2-Sample Unequal t-Test		0.003

However, the counts at Week 2 were still lower than baseline and greater than the number collected from the users of the test soap bar. This would indicate that there was a residual benefit of the test bar even after subjects resumed use of their normal bar.

Counts were made of the larger flakes on the glass slide, ignoring debris from skin scale fragments, hairs, clothing, etc. At baseline, subjects demonstrated large cohesive skin scale flakes. These large flakes probably accounted for the appearance of ashen skin present at study entry. At the end of Week 1, not only was there reductions in the number of cell scales but the skin scales were reduced to a fine powder. The smaller size of the corneocyte debris probably accounted for the visible improvement in ashen skin. It is important to note that the group that

continued to use the test soap for Week 2 demonstrated a further reduction in skin scales (Table 3).

Skin Ashiness

As observed by the medical investigator's and subject's self-assessments, there was a statistically significant reduction from baseline in the observed level of skin ashiness at the end of Week 1. The 30 subjects that remained on the test soap bar continued to show a reduction in their ashiness levels for Week 2 as assessed by the medical investigator and subjects. The 10 subjects that returned to using their normal product for Week 2 showed an increase in skin ashiness as compared to Week 1. The subject's self-assessment indicates a return to their baseline level of ashiness. However, the medical investigator's assessment shows an increase for Week 2 but not to the baseline levels. Statistical comparison showed that at Week 2 there was significantly less ashiness in those subjects that remained on the test soap bar than those that returned to their normal product.

Skin Dryness

For both Weeks 1 and 2 there was a statistically significant reduction from baseline in the overall level of skin dryness as assessed by the medical investigator and the subject's self-assessments for the novel soap bar users. The dryness levels continued to decrease for those subjects that remained on the novel soap bar. The development of dryness for Week 2 follows the same pattern that was observed for ashiness by both the medical investigator and the subjects: increase in dryness upon returning to their normal product. However, the subjects' self-assessment showed skin dryness level increased to the baseline level. At week 2, a 2-sample unequal t-test analysis indicated significantly less dryness in subjects that continued to use the novel soap bar than those that returned to their normal product.

Skin Roughness

Assessment for skin roughness approximated the same results and had the same general trends as for skin dryness.

CLAIMS

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1. A method for decreasing the level of skin ashiness in an individual with xerosis and having a Fitzpatrick type 4 or higher score comprising topically applying to
5 the skin of said individual a composition (a) having a cleansing surfactant or mixture of cleansing surfactants in quantity sufficient to cleanse the skin and (b) a moisturizing component or mixture of components in quantities sufficient to decrease the level of said skin ashiness.
2. The method in accordance with claim 1 wherein the composition is a rinse off
10 composition and is rinsed off from the skin with water.
3. The method in accordance with claim 1 wherein the decrease in the level of skin ashiness can be measured by a scraping test.
4. The method in accordance with claim 1 wherein an anionic surfactant is present.
5. The method in accordance with claim 4 wherein the composition is a bar.
- 15 6. The method in accordance with claim 4 wherein the composition is a liquid or gel.
7. The method in accordance with claim 1 wherein the moisturizing component is selected from the group consisting of long chain alkanes, long chain alkenes, mineral oils, polyalpha olefins, petrolatum and mixtures thereof.
8. The method in accordance with claim 8 wherein the moisturizing component is
20 petrolatum.
9. The method in accordance with claim 7 wherein the composition is a solid.
10. The method in accordance with claim 9 wherein the moisturizing component is petrolatum.
11. The method in accordance with claim 7 wherein the composition is a liquid or gel.
- 25 12. The method in accordance with claim 11 wherein the moisturizing component is petrolatum.
13. The method in accordance with claim 7 wherein there is an additional emollient present in the composition.
14. The method in accordance with claim 13 wherein the additional emollient is
30 silicone.
15. The method in accordance with claim 1 wherein after the composition is no longer topically applied, the decrease in skin ashiness continues for at least one week.
16. A method for assessing the presence of ashen skin on an individual having
35 xerosis and a Fitzpatrick type 4 or higher score which comprises
 - (a) scraping the skin of said individual,
 - (b) collecting the loose dander accumulated, and
 - (c) counting the number of corneocytes.

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17. The method in accordance with claim 16 wherein the corneocytes are counted visually.
18. The method in accordance with claim 16 wherein the corneocytes are counted with a microscope.

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INTERNATIONAL SEARCH REPORT

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	EP 1 093 800 A (KAO CORP) 25 April 2001 (2001-04-25) page 5, lines 17-19; claim 1; examples 1-5	1-15

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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aparecen al comienzo de cada edición de la Gaceta del PCT

(54) Título: TRATAMIENTO COSMETICO PARA LA XEROSIS

(57) Resumen: Un método para disminuir el nivel de resequead de la piel en un individuo con xerosis y que tiene una calificación Fitzpatrick tipo 4 o mayor que comprende típicamente aplicar a la piel de dicho individuo una composición (a) que tiene un surfactante limpiador o mezcla de surfactantes limpiadores en una cantidad suficiente para limpiar la piel y (b) un componente humectante o mezcla de componentes humectantes en cantidades suficientes para disminuir el nivel de dicha resequead de la piel.

RESUMEN

Un método para disminuir el nivel de sequedad de la piel en un individuo con xerodermia y que tiene una calificación Fitzpatrick tipo 4 o superior de piel, cuyo método comprende aplicar a la piel de dicho individuo una composición (a) que tiene un agente tensoactivo limpiador o una mezcla de agentes tensoactivos limpiadores en cantidad suficiente para limpiar la piel y (b) un componente humectante o mezcla de componentes humectantes en cantidades suficientes para disminuir el nivel de dicha sequedad de la piel.

ANTECEDENTES DE LA INVENCION

La piel seca es una de las condiciones más comunes de la piel manifestada por las personas de ambos sexos y de todas las edades. Inicialmente la piel seca se observa como un incremento en el número de corneocitos descamados presentes en la superficie de la piel. Estos corneocitos aparecen como una caspa blanca sobre la piel de los individuos caucásicos pero no representan una preocupación cosmética significativa dado que el color de piel de fondo también es clara. Ello no es así en aquellas personas con tipos de piel coloreadas más oscuras, tales como los tipos 4 o superiores Fitzpatrick. La piel seca en las personas con pigmentación más oscura es conocida como piel cenicienta, dado que la corteza de la piel pigmentada aparece gris, debido a la presencia de melanina incrementada en los corneocitos que se descaman. La piel cenicienta seca, médicamente conocida como xerodermia, es el resultado de un contenido de agua disminuido en el stratum corneum, lo cual conlleva a la descamación anormal de los corneocitos.

Se ha descubierto un nuevo método que proporciona una medición objetiva, no invasiva de la escala de corneocitos en las personas con xerodermia. Las composiciones para el tratamiento de la gente con xerodermia pueden ser rápidamente evaluadas utilizando esta prueba. De esta manera, se ha encontrado una composición que trata efectivamente a la gente con xerodermia, la piel cenicienta de aquellas personas que tienen una piel del tipo 4 Fitzpatrick o superior. Esta composición no sólo es efectiva durante la aplicación tópica sino también tiene un efecto residual después de haberse detenido el uso de la composición.

RESUMEN DE LA INVENCION

Un método para disminuir el nivel de color ceniciento de la piel en un individuo con xerodermia y que tiene una piel tipo 4 Fitzpatrick o superior, el cual comprende aplicar en forma tópica a la piel de dicha persona una composición que tiene un agente tensoactivo limpiador o una mezcla de

agentes tensoactivos limpiadores, en cantidades suficientes para limpiar la piel y un componente humectante, o mezcla de componentes humectantes en cantidades suficientes para disminuir el nivel de aspecto ceniciento de la piel.

Otro aspecto de la invención consiste en un método para la evaluación de la presencia de piel cenicienta en una persona que tiene xerodermia y una clasificación de piel Fitzpatrick tipo 4 ó superior, cuyo método comprende descamar la piel de dicha persona, recoger la caspa suelta acumulada y contar el número de corneocitos.

DESCRIPCIÓN DETALLADA DE LA INVENCION

La piel cenicienta o gris es un término utilizado para describir el aspecto del polvo blanco grisáceo de piel que tiene un tipo de piel de color más oscuro, tal como el de las personas de color negro, con una clasificación Fitzpatrick tipo 4 ó superior. Conforme previamente especificado, debido al contraste en los colores, la piel cenicienta es un asunto cosmético importante en las personas con piel oscura. El nuevo sistema de prueba aquí revelado permite una evaluación cuantitativa y cualitativa de la piel cenicienta debido a que los corneocitos que se descaman ahora pueden ser analizados en forma cuantitativa y cualitativa. Esto puede lograrse de una manera simple raspando la piel, recogiendo las escamas y observando visualmente y/o observando a través de un microscopio de disección los corneocitos que se descaman de manera cuantitativa y de manera cualitativa. Mediante este procedimiento ahora se puede evaluar rápidamente la eficacia de las formulación para la piel por sus efectos sobre la misma. Estas formulaciones pueden ser evaluadas por su efecto sobre la piel normal para ver si la formulación mejora la piel cenicienta o el efecto de una formulación en las personas que tienen piel cenicienta. Hasta ahora el estado del sistema del arte para la evaluación de la piel cenicienta era el realizar la observación visual de la piel cenicienta. El método de raspado de la piel actualmente revelado proporciona un examen cualitativo más cabal de los corneocitos y permite un recuento cuantitativo exacto de los corneocitos.

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Las composiciones que pueden tener un efecto positivo sobre la xerodermia ahora pueden ser evaluadas utilizando este sistema nuevo y mejorado. Los sistemas de humectación pueden ser evaluados bajo este nuevo sistema. Se ha encontrado una formación tópica que puede ser utilizada en el manejo de la piel cenicienta. Resulta interesante observar no sólo la reducción de lo ceniciento de la piel sino también que se presenta una reducción mensurable de la sequedad de la piel y la aspereza de la piel. Con estas formulaciones los efectos positivos se mantienen durante por lo menos una semana después de la terminación de la aplicación. Esto demuestra que también hay un efecto residual. La formulación es una formulación limpiadora de la piel que se enjuaga, la cual comprende: (a) por lo menos un agente tensoactivo limpiador o una mezcla de agentes tensoactivos limpiadores en cantidades suficientes para limpiar la piel, (b) una sustancia hidrocarbonosa en cantidades suficientes para causar la reducción del aspecto ceniciento de la piel en las personas que tienen xerodermia, siendo la reducción medida por una prueba de raspado. La composición se retira de la piel enjuagando con agua después de la utilización durante un período de tiempo menor que un minuto, preferiblemente menor que 45, 30 ó 15 segundos después de la aplicación. Ello contrasta con aquella loción o crema (composición que se deja puesta) que se deja sobre la piel el mayor tiempo posible.

Cualquier agente tensoactivo limpiador puede ser empleado en la composición limpiadora.

Los agentes tensoactivos limpiadores que pueden ser empleados incluyen: jabón, un alquilo o alquenilo de cadena extensa, una sal de ácido carboxílico ramificado o normal tal como sal sódica, potásica, de amonio o amonio sustituido, que pueden estar presentes en la composición como un ejemplo de un agente tensoactivo aniónico. Ejemplos de alquilo o alquenilo de cadena extensa son aquellos de aproximadamente 8 hasta aproximadamente 22 átomos de carbono de longitud, específicamente aproximadamente 10 hasta aproximadamente 20 átomos de carbono de longitud, más específicamente alquilo y aún más específicamente normal o

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normal con escasas ramificaciones. Las pequeñas cantidades de enlace(s) olefínico(s) pueden estar presentes en las secciones predominantemente alquilo, particularmente si la fuente de grupo "alquilo" es obtenida de un producto natural tal como sebo, aceite de nuez de coco y similares.

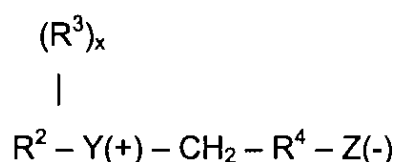
También otros agentes tensoactivos limpiadores pueden estar presentes en la composición. Ejemplos de dichos agentes tensoactivos son los agentes tensoactivos aniónicos, anfotéricos, no iónicos y catiónicos. Ejemplos de agentes tensoactivos aniónicos incluyen, mas sin limitarse a ellos, jabones, alquil sulfatos, acil sarcosinatos aniónicos, metil acil tauratos, N-acil glutamatos, acil isetionatos, alquil sulfosuccinatos, alquil fosfato ésteres, alquil fosfato ésteres etoxilados, trideceth sulfatos, condensados de proteínas, alquil sulfatos etoxilados y similares.

Las cadenas alquilo para estos agentes tensoactivos son C_8-C_{22} , preferiblemente $C_{10}-C_{18}$, más preferiblemente $C_{12}-C_{14}$.

Los agentes tensoactivos aniónicos no-jabonosos pueden ser ejemplificados por las sales de metal alcalino del sulfato orgánico que tienen en su estructura molecular un radical alquilo contentivo desde aproximadamente 8 hasta aproximadamente 22 átomos de carbono y un radical ácido sulfónico o éster de ácido sulfúrico (incluido en el término alquilo está la porción alquilo de los radicales acilo superiores). Los preferidos son los alquil sulfatos de sodio, amonio, potasio o trietanolamina, especialmente aquellos obtenidos sulfatando los alcoholes superiores (C_8-C_{18} átomos de carbono), sulfatos y sulfonatos monoglicéridos de ácido graso de aceite de nuez de coco sódico; las sales de sodio o potasio de ésteres de ácido sulfúrico del producto de reacción de 1 mol o de un alcohol graso superior (por ejemplo, alcoholes de aceite de nuez de coco o sebo) y 1 hasta 12 moles de óxido de etileno; sales de sodio o potasio de éter sulfato de óxido de etileno alquil fenol con 1 hasta 10 unidades de óxido de etileno por molécula y donde los radicales alquilo contienen desde 8 hasta 12 átomos de carbono, alquil gliceril éter sulfonatos de sodio; el producto de reacción de ácidos grasos que tienen desde 10 hasta 22 átomos de carbono esterificados con ácido isetiónico y neutralizados con hidróxido de sodio; sales solubles en

agua de los productos de condensación de ácidos grasos con sarcosina; y otros conocidos en el arte.

Los agentes tensoactivos zwitteriónicos pueden ser ejemplificados por medio de aquellos que pueden ser ampliamente descritos como derivados de compuestos de amonio, fosfonio y sulfonio cuaternarios alifáticos, en los cuales los radicales alifáticos pueden ser de cadena recta o ramificada y donde uno de los sustituyentes alifáticos contiene desde aproximadamente 8 hasta 18 átomos de carbono y uno contiene un grupo aniónico que solubiliza-agua, por ejemplo, carboxi, sulfonato, sulfato, fosfato o fosfonato. Una fórmula general para estos compuestos es:



Donde R^2 contiene un radical alquilo, alquenilo o hidroxil alquilo que alcanza desde aproximadamente 8 hasta aproximadamente 18 átomos de carbono, desde 0 hasta aproximadamente 10 mitades de óxido de etileno y desde 0 hasta 1 mitad glicerilo; Y es seleccionado a partir del grupo que consiste de átomos de nitrógeno, fósforo y azufre; R^3 es un grupo alquilo o monohidroxialquilo que contiene 1 hasta aproximadamente 3 átomos de carbono; X es 1 cuando Y es un átomo azufre y 2 cuando Y es un átomo nitrógeno o fósforo, R^4 es un alquilenilo o hidroxialquilenilo que alcanza desde 0 hasta aproximadamente 4 átomos de carbono y Z es un radical seleccionado a partir del grupo que consiste de carboxilato, sulfonato, sulfato, fosfonato y fosfato.

Los ejemplos incluyen: 4-[N,N-di(2-hidroxietil)-N-octadecilamonio]-butano-1-carboxilato; 5-[S-3-hidroxipropil-S-hexadecilsulfonio]-3-hidroxipentano-1-sulfato; 3-[P,P,P-dietil-P 3,6,9 trioxatetradecil-fosfonio]-2-hidroxipropano-1-fosfonato; 3-[N,N-dipropil-N-3 dodecoxi-2-hidroxipropilamonio]-propano-1-fosfonato; 3-(N,N-dimetil-N-hexadecilamonio) propano-1-sulfonato; 3-(N,N-dimetil-N-hexadecilamonio)-2-hidroxipropano-1-sulfonato; 4-(N,N-di(2-hidroxietil)-N-(2-hidroxidodecil) amonio)-butano-1-carboxilato; 3-[S-etil-S-(3-dodecoxi-2-

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hidroxipropil)sulfonio]-propano-1 fosfato; 3-(P,P-dimetil-P-dodecilfosfonio)-propano-1-fosfonato; y 5-[N,N-di(3-hidroxipropil)-N-hexadecilamonio]-2-hidroxipentano-1-sulfato.

Ejemplos de agentes tensoactivos anfotéricos que pueden utilizarse en las composiciones de la presente invención son aquellos que pueden ser descritos en forma general como aminas secundarias y terciarias alifáticas en las cuales el radical alifático puede ser de cadena recta o ramificada y donde uno de los sustituyentes alifáticos contiene desde aproximadamente 8 hasta aproximadamente 18 átomos de carbono y uno contiene un grupo aniónico soluble en agua, por ejemplo, carboxi, sulfonato, sulfato, fosfato o fosfonato. Ejemplos de los compuestos que están dentro de esta definición son 3-dodecilaminopropionato sódico, 3-dodecilaminopropao sulfonato sódico, N-alquiltaurinas, tales como aquella preparada por medio de la reacción de dodecilamina con isetionato de sodio de acuerdo con las enseñanzas de la Patente EE.UU. No. 2.658.072, ácidos aspárticos N-alquilo superiores, tales como aquellos producidos de acuerdo con las enseñanzas de la Patente EE.UU. No. 2.438.091 y los productos vendidos bajo la marca de fábrica "Miranol" y descritos en la Patente EE.UU. No. 2.528.378. Otros productos anfotéricos, tales como las betaínas, también son útiles en la presente composición.

Ejemplos de las betaínas útiles en el presente incluyen las betaínas alto alquilo, tales como coco dimetil carboximetil betaína, lauril dimetil carboxi-metil betaína, lauril dimetil alfa-carboxietil betaína, cetil dimetil carboximetil betaína, lauril bis-(2-hidroxietil) carboxi metil betaína, estearil bis-(2-hidroxipropil) carboximetil betaína, oleil dimetil gamma-carboxipropil betaína, lauril bis-(2-hidroxipropil) alfa-carboxietil betaína, etc. Las sulfobetinas pueden ser representadas por coco dimetil sulfopropil betaína, estearil dimetil sulfopropil betaína, amido betaínas, amidosulfobetinas y similares.

Muchos agentes tensoactivos catiónicos son conocidos en el arte. Como ejemplo se pueden mencionar los siguientes:

- cloruro de estearildimetilbencil amonio;

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- cloruro de dodeciltrimetilamonio;
- nitrato de nonilbenciletildimetil amonio;
- bromuro de tetradecilpiridino;
- cloruro de laurilpiridino;
- cloruro de cetilpiridino;
- cloruro de laurilpiridino;
- bromuro de laurilisoquinolio;
- cloruro de dimetil amonio disebo (hidrogenado);
- cloruro de dilaurildimetil amonio; y
- cloruro de estearalconio.

Los agentes tensoactivos no iónicos incluyen aquellos que pueden ser ampliamente definidos como compuestos producidos por la condensación de grupos de óxido de alquileo (de naturaleza hidrofílica) con un compuesto hidrofóbico orgánico, que puede ser de naturaleza alifática o alquil aromática.

Ejemplos de las clases preferidas de agentes tensoactivos no iónicos son:

1. Los condensados de óxido de polietileno de alquil fenoles, por ejemplo, los productos de condensación de alquil fenoles que tienen un grupo alquilo contentivo desde aproximadamente 6 hasta 12 átomos de carbono, sea en configuración de cadena recta o de cadena ramificada, con óxido de etileno, estando dicho óxido de etileno presente en cantidades iguales a 10 hasta 60 moles de óxido de etileno por mol de alquil fenol. El sustituyente alquilo en dichos compuestos puede ser derivado de propileno polimerizado, diisobutileno, octano o nonano, por ejemplo.

2. Aquellos derivados de la condensación de óxido de etileno con el producto resultante de la reacción de productos óxido de propileno y etilen diamina que pueden variarse en composición dependiendo del equilibrio que se desee entre elementos hidrofóbicos e hidrofílicos. Por ejemplo, los compuestos contentivos desde aproximadamente 40% hasta aproximadamente 80% polioxietileno en peso y que tienen un peso molecular desde aproximadamente 5.000 hasta aproximadamente 11.000 que resultan de la reacción de grupos de óxido de etileno con una base hidrofóbica constituidos del producto de reacción de etilendiamina y óxido de propileno

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excesivo, teniendo dicha base un peso molecular del orden de 2.500 hasta 3.000, resultan satisfactorios.

3. El producto de condensación de alcoholes alifáticos que tienen desde 8 hasta 18 átomos de carbono, sea en configuración de cadena recta o cadena ramificada con óxido de etileno, por ejemplo, un condensado de óxido de etileno alcohol de nuez de coco que tiene desde 10 hasta 30 moles de óxido de etileno por mol de alcohol de nuez de coco, teniendo la fracción de alcohol de nuez de coco desde 10 hasta 14 átomos de carbono. Otros productos de condensación de óxido de etileno son ésteres de ácido graso etoxilados de alcoholes polihídricos (por ejemplo, Tween 20-polioxietileno (20) sorbitán monolaurato).

4. Los óxidos de amina terciaria de cadena extensa correspondientes a la siguiente fórmula general:



Donde R_1 contiene un radical alquilo, alquenilo o monohidroxi alquilo desde aproximadamente 8 hasta aproximadamente 18 átomos de carbono, desde 0 hasta aproximadamente 10 mitades de óxido de etileno, y desde 0 hasta 1 mitad glicerilo, y, R_2 y R_3 contienen desde 1 hasta aproximadamente 3 átomos de carbono y desde 0 hasta aproximadamente 1 grupo hidroxi, por ejemplo, radicales metilo, etilo, propilo, hidroxi etilo o hidroxi propilo. La flecha en la fórmula es una representación convencional de un enlace semipolar. Ejemplos de los óxidos de amina adecuados para utilizarse en esta invención incluyen el óxido de dimetildodecilamina, el óxido de oleil-di(2-hidroxietyl) amina, el óxido de dimetiloctilamina, óxido de dimetildecilamina, óxido de dimetil-tetradecilamina, óxido de 3,6,9 trioxaheptadecildietilamina, óxido de di(2-hidroxietyl)-tetradecilamina, óxido de 2-dodecoxietildimetilamina, óxido de 3-dodecoxi-2-hidroxiopropil di(3-hidroxiopropil)amina, óxido de dimetil-hexadecilamina.

5. Los óxidos de fosfina terciaria de cadena extensa correspondientes a la siguiente fórmula general:



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Donde R contiene un radical alquilo, alquenilo o monohidroxialquilo que alcanza desde 8 hasta 20 átomos de carbono en extensión de cadena, desde 0 hasta aproximadamente 10 mitades de óxido de etileno y desde 0 hasta 1 mitad glicerilo y R' y R'' son, cada uno, un grupo alquilo o monohidroxialquilo contentivo desde 1 hasta 3 átomos de carbono. La flecha en la fórmula es una representación convencional de un enlace semipolar. Ejemplos de óxidos de fosfina adecuados son: óxido de dodecildimetilfosfina, óxido de tetra-decilmétiletilfosfina, óxido de 3,6,9-trioxaoctadecildimetilfosfina, óxido de cetildimetilfosfina, óxido de 3-dodecoxi-2-hidroxipropil di(2-hidroxietil) fosfina, óxido de estearildimetilfosfina, óxido de cetiletil propilfosfina, óxido de oleildietilfosfina, óxido de dodecildietilfosfina, óxido de tetra-decildietilfosfina, óxido de dodecildipropilfosfina, óxido de dodecil-di(hidroximetil) fosfina, óxido dodecil di(2-hidroxietil) fosfina, óxido de tetradecilmetil-2-hidroxipropilfosfina, óxido de oleildimetilfosfina, óxido de 2-hidroxidodecildimetilfosfina.

6. Dialquil sulfóxidos de cadena extensa que contienen un radial alquilo o hidroxialquilo de cadena corta de 1 hasta aproximadamente 3 átomos de carbono (usualmente metilo) y una cadena hidrofóbica extensa que contiene radicales alquilo, alquenilo, hidroxialquilo o ceto alquilo contentivos desde aproximadamente 8 hasta aproximadamente 20 átomos de carbono, desde 0 hasta aproximadamente 10 mitades de óxido de etileno y desde 0 hasta 1 mitad glicerilo. Los ejemplos incluyen: octadecil metil sulfóxido, 2-cetotridecil metil sulfóxido, 3,6,9-trioxaoctadecil 2-hidroxietil sulfóxido, dodecil metil sulfóxido, oleil 3-hidroxipropil sulfóxido, tetradecil metil sulfóxido, 3-metoxitridecilmetil sulfóxido, 3-hidroxitridecil metil sulfóxido, 3-hidroxil-4-dodecoxibutil metil sulfóxido.

7. Los alquil poliglicósidos donde el grupo alquilo es aproximadamente 10 hasta aproximadamente 20 átomos de carbono, preferiblemente aproximadamente 10 hasta aproximadamente 18 átomos de carbono y el grado de polimerización del glicósido alcanza desde aproximadamente 1 hasta aproximadamente 3, preferiblemente aproximadamente 1,3 hasta aproximadamente 2,0.

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Dado que la piel cenicienta reseca, xerodermia, parece ser resultado del contenido de agua disminuido del stratum corneum, lo cual conlleva a una descamación anormal de los corneocitos, la presencia de sustancias hidrocarbonosas parece llevar alivio al problema mediante a humectación de la piel. Las sustancias que dan origen a la reducción de la calidad cenicienta de la piel incluyen alcanos de cadena extensa, alquenos de cadena extensa, aceites minerales, petrolato, polialfa olefinas, ceras microcristalinas, cera de parafina, cera de abejas y las ceras naturales derivadas de vegetales así como las mezclas de los mismos.

También se pueden emplear otros materiales en la composición. Los ejemplos de estos componentes son agentes de color, estabilizadores de UV, agentes antibacterianos, agentes espesantes, agentes de formación de gel, emolientes adicionales y similares. Los componentes preferidos, por razones que incluyen la sensación de la piel, suponen polímeros catiónicos. Ejemplos de dichos materiales catiónicos incluyen los varios policuaternarios conocidos en el arte que incluyen, mas sin limitarse a ellos, Polyquaternium 2 (un polielectrolito formado a partir de iones cuaternizados), Polyquaternium 4 (cloruro de hidroxixelulosa dialildimetil amonio), Polyquaternium 5 (acrilamina / β -metacriloetiltrimetil amonio metosulfato), Polyquaternium 6 y 7 (homopolímero de dimetil dialil amonio cloruro y el copolímero de dimetil dialil amonio cloruro con acrilamida), Polyquaternium 8 (metil y estearil dimetilaminoetil metacrilato cuaternizado con dimetilsulfato), Polyquaternium 10 (1-hidroxipropil trimetil amonio cloruro éteres de hidroxietil celulosa), Polyquaternium 11 (PVP cuaternizado y metilaminoetil metacrilato), Polyquaternium 16 (copolímero de PVP / metil vinilimidazolina), Polyquaternium 17 y 18 (polielectrolito formado a partir de iones cuaternizados), Polyquaternium 19 (una sal hidroxipropil amina de alcohol vinílico), Polyquaternium 24 (sal polimérica de amonio cuaternizado de hidroximetilcelulosa y epóxido lauril dimetil amonio sustituido), Polyquaternium 27 (polielectrolito formado a partir de iones cuaternizados). Los otros materiales catiónicos incluyen Polycare 133 (un cloruro de

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polimetilacrilamidapropiltrimonio de Rhone-Pulenc). Estos materiales son conocidos como del tipo que neutraliza la carga negativa, tal como en la piel.

Los otros emolientes incluyen ácidos grasos de cadena extensa, saturados o insaturados, tales como ácidos láurico, oleico, mirístico, palmítico y esteárico, manteca de cacao, manteca de shea, lanolina y siliconas tales como polidimetil siloxano.

La forma física de la composición puede ser sólida como una barra, un líquido o gel o un mousse, espuma, aerosol o atomizador. La porción activa del atomizador en aerosol, espuma o mousse generalmente es un líquido o gel que tiene un sistema de entrega separado. En la forma sólida, la cantidad de agente tensoactivo limpiador generalmente es por lo menos aproximadamente 40, 50 ó 60% en peso con un máximo de no más de aproximadamente 80, 85 ó 92% en peso de composición. En general tienen forma de barra para la limpieza de la piel. Para el líquido o gel, un mínimo de agente tensoactivo limpiador de la piel o mezclas de agentes tensoactivos es de aproximadamente 4% en peso de composición líquida o en gel. Los mínimos preferidos son aproximadamente 6, 8 ó 10% en peso. Para las cantidades máximas, generalmente hay menos de aproximadamente 35, 25, 20 ó 15% en peso.

Con respecto a los emolientes adicionales, cuando empleados, hay un mínimo de aproximadamente 0,1% en peso, 0,2, 0,4 ó 0,5% en peso de composición sólida y un máximo de no más de aproximadamente 8, 10 ó 12% en peso de composición. Con respecto a un líquido o gel, hay un máximo de aproximadamente 0,05% en peso, preferiblemente aproximadamente 0,1, 0,2 ó 0,3% en peso. Se puede emplear un máximo de no más de aproximadamente 25, 20, 15 ó 10% en peso.

A continuación se presenta una descripción del método de ensayo y los resultados utilizando una barra de jabón que tiene la siguiente composición:

Componente	% en Peso
Jabón	
Petrolato	

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Silicona	
Polyquat 6	
Fragancia	
Antioxidantes, Preservativos, etc.	
Agua, q.s.	

Cuarenta sujetos de sexo masculino o femenino mayores de edad con piel tipo 4 o superior Fitzpatrick se inscribieron en un estudio de 2 semanas para determinar el efecto de una novedosa formulación en jabón sobre la reducción del aspecto de la piel cenicienta. Los sujetos eran usuarios de jabón y tenían piel cenicienta indicativa de resequedad de la piel pero sin evidencia de dermatitis u otras enfermedades de la piel. Los sujetos fueron sometidos a una evaluación de piel de línea base por parte del investigador, raspaduras de piel (conforme descrito debajo) y condujeron las auto evaluaciones sobre lo grisáceo de la piel, la aspereza y la resequedad. (Tabla 1). Las raspaduras de la piel se utilizaron para evaluar visualmente la cantidad de escamas de piel presentes.

Tabla 1
Escala de Evaluación para Piel Cenicienta,
Aspereza y Resequedad

Resultado	Definición de Evaluación
0	Ninguna
1	Nivel Leve
2	Nivel Moderado
3	Nivel Severo

Los cuarenta sujetos recibieron la barra de jabón para ser utilizada durante una semana. Después de una semana de uso, treinta (30) sujetos continuaron con la misma barra mientras diez (10) sujetos se cambiaron a su jabón normal. Los sujetos fueron asignados de manera aleatoria 10 sujetos al Grupo A y 30 al Grupo B. A fin de mantener el estudio ciego, el investigador médico no tuvo conocimiento de la colocación de los sujetos en los grupos

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hasta finalizado el estudio. Los sujetos volvieron una vez a la semana al final de las Semanas 1 y 2 para evaluación de su condición de la piel.

Las raspaduras de piel se utilizaron para evaluar visualmente la cantidad de escamas de piel presentes. El lado de una platina de microscopio fue suavemente pasado a través de la piel del antebrazo derecho interno (3 cm debajo de la fosa anticubital) diez veces para recoger la caspa suelta. Se registró el número de corneocitos obtenido y la calidad de la laminilla de piel fue evaluada con la ayuda de un microscopio de disección. Esto suplió una medición objetiva, no invasiva de la cantidad de escamas presentes en la superficie de la piel.

Análisis Estadístico

Se utilizó una prueba-t pareada para evaluar la data de las escamas de piel tanto del investigador como del paciente para las comparaciones de Línea Base y Semana 1. Se utilizó una prueba-t pareada para comparar la data de Línea Base y Semana 2 para el grupo de 30 sujetos. En adición, se utilizó una prueba-t no igual de 2 muestras cuando se comparó el Grupo de 30 con el Grupo de 10 al final de la Semana 2.

Resultados y Discusión.

Raspaduras de Escamas de la Piel

Después de una semana de utilización de la barra novedosa hubo una reducción estadísticamente significativa en el número de escamas de piel sobre la platina del microscopio (véase la Tabla 2).

Tabla 2

Semana 1

Reducción en las Escamas de Piel por la Novedosa Barra de Jabón

Recuento Promedio Célula	Línea base n = 40 18,88 ± 2,05	Semana 1 n = 40 11,50 ± 1,56
Prueba t-pareada Vs. Línea base		<0,001



Para la Semana 2, el número de comeocitos continuó decreciendo para aquellos que continuaron con la barra de ensayo (Tabla 3).

Tabla 3
Semana 2
Reducción en las Escamas de Piel por la Novedosa Barra de Jabón

Recuento Promedio Célula	Línea base n = 30 12,03 ± 1,56	Semana 1 n = 30 6,90 ± 0,81
Prueba t-pareada Vs. Línea base		<0,001

Para los sujetos que volvieron a su producto normal hubo un incremento en las escamas de la piel (tabla 4).

Tabla 4
Comparación de las Escamas de Piel en la Semana 2

Producto de Prueba	Barra Novedosa	Barra Normal
Parámetro de evaluación	Escamas de Piel	Escamas de Piel
Número de sujetos	n = 30	n = 10
Recuento Promedio Células	6,90 ± 0,81	13,80 ± 1,32
Prueba-t de 2 Muestras No Iguales.		0,003

Sin embargo, los recuentos en la Semana 2 fueron todavía inferiores que la línea base y mayores que el número recogido de los usuarios de la barra de jabón de ensayo. Esto indicará que hubo un beneficio residual de la barra de prueba inclusive después que los sujetos retomaron el uso de su barra normal.

Se hicieron los recuentos de las laminillas más grandes sobre la platina de vidrio, ignorando los residuos de los fragmentos de escamas de piel, los vellos, prendas de vestir, etc. En línea base, los sujetos demostraron laminillas de escamas de piel grandes cohesivas. Estas láminas grandes probablemente fueron la razón del aspecto de piel cenicienta presente al ingresar al estudio. Al final de la Semana 1, no sólo hubo reducciones en el número de escamas celulares sino que las escamas de piel se redujeron a

un polvo fino. El tamaño más pequeño de los residuos de corneocitos probablemente dio razón de la mejora visible en la piel cenicienta. Es importante notar que el grupo que continuó utilizando el jabón de prueba durante la Semana 2 demostró mayor reducción en las escamas de piel (Tabla 3).

Piel Cenicienta

Conforme observado por las evaluaciones de los investigadores médicos y las propias del sujeto, hubo una reducción estadísticamente significativa de la línea base en el nivel observado de piel cenicienta al final de la Semana 1. Los treinta (30) sujetos que continuaron con la barra de jabón del ensayo continuaron mostrando una reducción en su niveles cenicientos durante la Semana 2, conforme evaluado por el investigador médico y los sujetos. Los diez (10) sujetos que volvieron a utilizar su producto normal para la Semana 2 mostraron un incremento de la piel cenicienta en comparación con la Semana 1. La auto-evaluación de los sujetos indica un retorno a su nivel de línea base; sin embargo, la evaluación de los investigadores médicos muestra un incremento para la Semana 2 pero no para los niveles de línea base. La comparación estadística demostró que en la Semana 2 hubo una piel cenicienta significativamente menor en aquellos sujetos que continuaron con la barra de jabón de ensayo en comparación con aquellos que volvieron a su producto normal.

Sequedad de la Piel

Para ambas semanas 1 y 2 hubo una reducción estadísticamente significativa de la línea base en el nivel general de sequedad de la piel, conforme evaluada por el investigador médico y las propias evaluaciones del sujeto para los usuarios de la novedosa barra de jabón. Los niveles de sequedad continuaron decreciendo para aquellos sujetos que continuaron con la novedosa barra de jabón. El desarrollo de la sequedad para la Semana 2 siguió el mismo modelo que fuera observado para la piel cenicienta por el investigador médico y los sujetos; incremento de la sequedad al volver a su producto normal. Sin embargo, la auto-evaluación de los sujetos demostró un nivel de sequedad de la piel incrementado a nivel de

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línea base. En la semana 2, un análisis de prueba-t no igual de dos muestras indicó una sequedad significativamente menor en los sujetos que continuaron utilizando la novedosa barra de jabón en comparación con aquellos que volvieron a su producto normal.

Aspereza de la Piel

La evaluación de la aspereza de la piel se aproximó a los mismos resultados y tuvo las mismas tendencias generales para sequedad de la piel.

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REIVINDICACIONES

1. Un método para disminuir el nivel de sequedad de la piel en un individuo con xerodermia y que tiene una calificación Fitzpatrick tipo 4 o superior de piel, cuyo método comprende aplicar por vía tópica a la piel de dicho individuo una composición (a) que tiene un agente tensoactivo limpiador o una mezcla de agentes tensoactivos limpiadores en cantidad suficiente para limpiar la piel y (b) un componente humectante o mezcla de componentes humectantes en cantidades suficientes para disminuir el nivel de dicha sequedad de la piel.

2. El método de acuerdo con la reivindicación 1, donde la composición es una composición de enjuagar y se enjuaga de la piel con agua.

3. El método de acuerdo con la reivindicación 1, donde la disminución en el nivel de piel cenicienta puede ser medida por una prueba de raspado.

4. El método de acuerdo con la reivindicación 1, donde está presente un agente tensoactivo aniónico.

5. El método de acuerdo con la reivindicación 4, donde la composición es en barra.

6. El método de acuerdo con la reivindicación 4, donde la composición es un líquido o gel.

7. El método de acuerdo con la reivindicación 1, donde el componente humectante es seleccionado a partir del grupo que consiste de alcanos de cadena extensa, alquenos de cadena extensa, aceites minerales, polialfaolefinas, petrolato y las mezclas de los mismos.

8. El método de acuerdo con la reivindicación 8, donde el componente humectante es petrolato.

9. El método de acuerdo con la reivindicación 7, donde la composición es un sólido.

10. El método de acuerdo con la reivindicación 9, donde el componente humectante es petrolato.

11. El método de acuerdo con la reivindicación 7, donde la composición es un líquido o un gel.

12. El método de acuerdo con la reivindicación 11, donde el componente humectante es petrolato.

13. El método de acuerdo con la reivindicación 7, donde hay un emoliente adicional presente en la composición.

14. El método de acuerdo con la reivindicación 13, donde el emoliente adicional es silicona.

15. El método de acuerdo con la reivindicación 1, en el cual después que la composición ya no es aplicada por vía tópica, la disminución en la sequedad de la piel continúa durante por lo menos una semana.

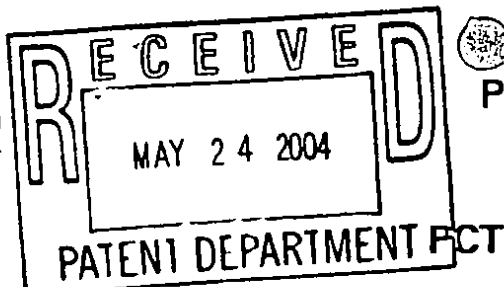
16. Un método para la evaluación de la presencia de piel cenicienta en un individuo que tiene xerodermia y una clasificación de piel tipo 4 ó superior de Fitzpatrick, que comprende:

- (a) raspar la piel de dicho individuo,
- (b) recoger la caspa suelta acumulada, y
- (c) contar el número de corneocitos.

17. El método de acuerdo con la reivindicación 16 donde los corneocitos se cuentan visualmente.

18. El método de acuerdo con la reivindicación 16, donde los corneocitos se cuentan con un microscopio.

PATENT COOPERATION TREATY



From the INTERNATIONAL BUREAU

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Applicant COLGATE-PALMOLIVE COMPANY et al	

- By means of this Form, which replaces any previously issued notification concerning submission or transmittal of priority documents, the applicant is hereby notified of the date of receipt by the International Bureau of the priority document(s) relating to all earlier application(s) whose priority is claimed. Unless otherwise indicated by the letters "NR", in the right-hand column or by an asterisk appearing next to a date of receipt, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- (If applicable) The letters "NR" appearing in the right-hand column denote a priority document which, on the date of mailing of this Form, had not yet been received by the International Bureau under Rule 17.1(a) or (b). Where, under Rule 17.1(a), the priority document must be submitted by the applicant to the receiving Office or the International Bureau, but the applicant fails to submit the priority document within the applicable time limit under that Rule, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
- (If applicable) An asterisk(*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b) (the priority document was received after the time limit prescribed in Rule 17.1(a) or the request to prepare and transmit the priority document was submitted to the receiving Office after the applicable time limit under Rule 17.1(b)). Even though the priority document was not furnished in compliance with Rule 17.1(a) or (b), the International Bureau will nevertheless transmit a copy of the document to the designated Offices, for their consideration. In case such a copy is not accepted by the designated Office as priority document, Rule 17.1(c) provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
10 Febr 2003 (10.02.2003)	10/361,444	US	28 Apr 2004 (28.04.2004)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 338.90.90	Authorized officer Lazar Joseph PANAKAL (Fax 338 9090) Telephone No. (41-22) 338 9634
--	---

PATENT COOPERATION TREATY

From the RECEIVING OFFICE

PCT

NOTIFICATION OF THE INTERNATIONAL APPLICATION NUMBER AND OF THE INTERNATIONAL FILING DATE

(PCT Rule 20.5(c))

To: ROSEMARY M. MIANO COLGATE-PALMOLIVE COMPANY 909 RIVER ROAD P.O. BOX 1343 PISCATAWAY, NEW JERSEY 08855-1343		Date of mailing (day/month/year) 20 Apr 2004	
Applicant's or agent's file reference 7116-00		IMPORTANT NOTIFICATION	
International application No. PCT/US2004/003944	International filing date (day/month/year) 10 Feb 2004	Priority date (day/month/year) 10 Feb 2003	
Applicant COLGATE-PALMOLIVE COMPANY			
Title of the invention METHOD OF USE			

1. The applicant is hereby notified that the international application has been accorded the international application number and the international filing date indicated above.	
2. The applicant is further notified that the record copy of the international application: ☒ was transmitted to the International Bureau on 20 Apr 2004 ☐ has not yet been transmitted to the International Bureau for the reason indicated below and a copy of this notification has been sent to the International Bureau*: ☐ because the necessary national security clearance has not yet been obtained. ☐ because (reason to be specified):	
* The International Bureau monitors the transmittal of the record copy by the receiving Office and will notify the applicant (with Form PCT/IB/301) of its receipt. Should the record copy not have been received by the expiration of 14 months from the priority date, the International Bureau will notify the applicant (Rule 22.1(c)).	
3. FOREIGN TRANSMITTAL LICENSE INFORMATION Completed by: MH ☐ Additional license for foreign transmittal not required. This subject matter is covered by a license already granted or the equivalent U.S. national application. Refer to that license for information concerning its scope. ☐ License for foreign transmittal not required. 37 CFR 5.11(e)(1) or 37 CFR 5.11(e)(2). However, a license may be required for additional subject matter. See 37 CFR 5.15(b). ☒ Foreign transmittal license granted. 35 U.S.C. 184; 37 CFR 5.11 on 15 Apr 2004 ☒ 37 CFR 5.15(a) ☐ 37 CFR 5.15(b)	
Name and mailing address of the receiving Office Mail Stop PCT, Commissioner for Patents P.O. Box 1450, Alexandria, VA 22313-1450 Facsimile No. 703-305-3230	Authorized officer Mark Hogarth Telephone No. 703-305-3749

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

To:

see form PCT/ISA/220

Date of mailing

(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/US2004/003944

International filing date (day/month/year)
10.02.2004

Priority date (day/month/year)
10.02.2003

International Patent Classification (IPC) or both national classification and IPC
A61K7/48

Applicant
COLGATE-PALMOLIVE COMPANY

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized Officer

Lindner, A

Telephone No. +49 89 2399-8640



**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2004/003944

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US2004/003944

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-18
	No: Claims	
Inventive step (IS)	Yes: Claims	1-15
	No: Claims	16-18
Industrial applicability (IA)	Yes: Claims	1-18
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

1. The following documents are referred to in this communication:
D1: EP1066827
D2: EP1093800
2. The subject-matter of claims 1-18 is novel (article 33(2) PCT).
3. The subject-matter of claims 1-15 does not involve an inventive step for the following reasons: both D1 and D2 refer to the treatment of xerosis by applying a composition comprising, among others, a surfactant and a moisturizer (D1: claim 1; p. 14, l. 32-36; D2: claim 1; examples 1-5). In view of the fact that skin ashiness is the direct consequence of xerosis, the person skilled in the art would expect that treatment of xerosis would also effect skin ashiness with dark-skinned individuals. As a consequence, the requirements of article 33(3) PCT are not met.
4. There are no objections in connection with claims 16-18.

**TRANSMITTAL LETTER TO THE
UNITED STATES RECEIVING OFFICE**

Date	10 February 2004
International Application No.	
Attorney Docket No.	IR 7116-00

I. Certification under 37 CFR 1.10 (if applicable)

EV 360774315 US
Express Mail mailing number

10 February 2004
Date of Deposit

I hereby certify that the application/correspondence attached hereto is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Assistant Commissioner for Patents, Washington, D.C. 20231.

<i>Carol Stanley</i>
Signature of person mailing correspondence

Carol Stanley
Typed or printed name of person mailing correspondence

☒ **New International Application**

TITLE	METHOD OF USE
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Earliest priority date (Day/Month/Year)
10 February 2003

SCREENING DISCLOSURE INFORMATION: In order to assist in screening the accompanying international application for purposes of determining whether a license for foreign transmittal should and could be granted and for other purposes, the following information is supplied. (Note: check as many boxes as apply):

- A. ☐ The invention disclosed was not made in the United States.
- B. ☐ There is no prior U.S. application relating to this invention.
- C. ☒ The following prior U.S. application(s) contain subject matter which is related to the invention disclosed in the attached international application. (NOTE: priority to these applications may or may not be claimed on form PCT/RO/101 (Request) and this listing does not constitute a claim for priority).

application no.	USSN 10/361,444	filed on	10 February 2003
application no.		filed on	

- D. ☐ The present international application ☐ is identical ☐ contains less subject matter than that found in the prior U.S. application(s) identified in paragraph C.
- E. ☒ The present international application ☒ contains additional subject matter not found in the prior U.S. application(s) identified in paragraph C. above. The additional subject matter is found on pages 10 and ☒ DOES NOT ALTER ☐ MIGHT BE CONSIDERED TO ALTER the general nature of the invention in a manner which would require the U.S. application to have been made available for inspection by the appropriate defense agencies under 35 U.S.C. 181 and 37 CFR 5.1. See 37 CFR 5.15

III. ☐ A Response to an Invitation from the RO/US. The following document(s) is (are) enclosed:

- A. ☐ A Request for An Extension of Time to File a Response
- B. ☐ A Power of Attorney (General or Regular)
- C. ☐ Replacement pages:

pages		of the request (PCT/RO/101)	pages		of the figures
pages		of the description	pages		of the abstract
pages		of the claims			

- D. ☐ Submission of Priority Documents

Priority document		Priority document	
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- E. ☐ Fees as specified on attached Fee Calculation sheet form PCT/RO/101 annex

IV. ☐ A Request for Rectification under PCT 91 ☐ A Petition ☐ A Sequence Listing Diskette

V. ☐ Other (please specify):

The person signing this form is the:	☐ Applicant	Rosemary M. Miano
	☒ Attorney/Agent (Reg. No.) 29,674	Typed name of signer
	☐ Common Representative	<i>Rosemary M. Miano</i> Signature

PCT REQUEST

Original (for SUBMISSION)

0	For receiving Office use only	
0-1	International Application No.	
0-2	International Filing Date	
0-3	Name of receiving Office and "PCT International Application"	
0-4	Form - PCT/RO/101 PCT Request	
0-4-1	Prepared Using	PCT-SAFE [EASY mode] Version 3.50 (Build 0002.153)
0-5	Petition The undersigned requests that the present International application be processed according to the Patent Cooperation Treaty	
0-6	Receiving Office (specified by the applicant)	United States Patent and Trademark Office (USPTO) (RO/US)
0-7	Applicant's or agent's file reference	7116-00
I	Title of Invention	METHOD OF USE
II	Applicant	
II-1	This person is:	applicant only
II-2	Applicant for	all designated States except US
II-4	Name:	COLGATE-PALMOLIVE COMPANY
II-5	Address:	300 Park Avenue New York, New York 10022 United States of America
II-6	State of nationality	US
II-7	State of residence	US
II-8	Telephone No.	732-878-7153
II-9	Facsimile No.	732-878-7853
III-1	Applicant and/or inventor	
III-1-1	This person is:	applicant and inventor
III-1-2	Applicant for	US only
III-1-4	Name (LAST, First)	KAZMI, Perveen
III-1-5	Address:	3 Elisha Drive Allentown, New Jersey 08501 United States of America
III-1-6	State of nationality	US
III-1-7	State of residence	US

PCT REQUEST

Original (for SUBMISSION)

III-2	Applicant and/or inventor	
III-2-1	This person is:	applicant and inventor
III-2-2	Applicant for	US only
III-2-4	Name (LAST, First)	DRAELOS, Zoe, D.
III-2-5	Address:	1817 Chestnut Drive High Point, North Carolina 27262 United States of America
III-2-6	State of nationality	US
III-2-7	State of residence	US
III-3	Applicant and/or inventor	
III-3-1	This person is:	applicant and inventor
III-3-2	Applicant for	US only
III-3-4	Name (LAST, First)	VOLZ, Elizabeth, D.
III-3-5	Address:	29 Yale Terrace Princeton, New Jersey 08540 United States of America
III-3-6	State of nationality	US
III-3-7	State of residence	US
IV-1	Agent or common representative; or address for correspondence	
	The person identified below is hereby/ has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:	agent
IV-1-1	Name (LAST, First)	MIANO, Rosemary, M.
IV-1-2	Address:	COLGATE-PALMOLIVE COMPANY 909 River Road P.O. Box 1343 Piscataway, New Jersey 08855-1343 United States of America
IV-1-3	Telephone No.	732-878-7153
IV-1-4	Facsimile No.	732-878-7853
IV-1-5	e-mail	rosemary_miano@colpal.com
IV-1-6	Agent's registration No.	29,674
V	DESIGNATIONS	
V-1	The filing of this request constitutes under Rule 4.9(a), the designation of all Contracting States bound by the PCT on the international filing date, for the grant of every kind of protection available and, where applicable, for the grant of both regional and national patents.	

PCT REQUEST

Original (for SUBMISSION)

V-3	Identification of parent application or patent grant		
V-3-1	Designation	US	
V-3-1-1	Kind of parent application or grant	continuation-in-part	
V-3-1-2	Parent application or grant No.	10/361,444	
V-3-1-3	Parent application or grant date	10 February 2003 (10.02.2003)	
VI-1	Priority claim of earlier national application		
VI-1-1	Filing date	10 February 2003 (10.02.2003)	
VI-1-2	Number	10/361,444	
VI-1-3	Country	US	
VI-2	Priority document request		
	The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) identified above as item(s):	VI-1	
VII-1	International Searching Authority Chosen	European Patent Office (EPO) (ISA/EP)	
VIII	Declarations	Number of declarations	
VIII-1	Declaration as to the identity of the inventor	-	
VIII-2	Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent	1	
VIII-3	Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application	1	
VIII-4	Declaration of inventorship (only for the purposes of the designation of the United States of America)	-	
VIII-5	Declaration as to non-prejudicial disclosures or exceptions to lack of novelty	-	

PCT REQUEST

Original (for SUBMISSION)

VIII-2-1	Declaration: Entitlement to apply for and be granted a patent Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent (Rules 4.17(ii) and 51bis.1(a)(ii)), in a case where the declaration under Rule 4.17(iv) is not appropriate: Name (LAST, First)	in relation to this international application COLGATE-PALMOLIVE COMPANY is entitled to apply for and be granted a patent by virtue of the following:
VIII-2-1(iv)		an assignment from KAZMI Perveen to COLGATE-PALMOLIVE COMPANY, dated 14 April 2003 (14.04.2003)
VIII-2-1(iv)		an assignment from DRAELOS Zoe, D. to COLGATE-PALMOLIVE COMPANY, dated 07 April 2003 (07.04.2003)
VIII-2-1(iv)		an assignment from VOLZ Elizabeth, D. to COLGATE-PALMOLIVE COMPANY, dated 15 April 2003 (15.04.2003)
VIII-2-1(ix)	This declaration is made for the purposes of:	all designations

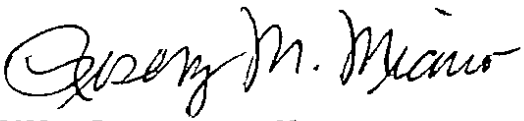
PCT REQUEST

Original (for SUBMISSION)

VIII-3-1	Declaration: Entitlement to claim priority Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application specified below, where the applicant is not the applicant who filed the earlier application or where the applicant's name has changed since the filing of the earlier application (Rules 4.17(III) and 51bis.1(a)(iii)) Name:	in relation to this international application COLGATE-PALMOLIVE COMPANY is entitled to claim priority of earlier application No. 10/361,444 by virtue of the following:
VIII-3-1(iv)		an assignment from KAZMI Perveen to COLGATE-PALMOLIVE COMPANY, dated 14 April 2003 (14.04.2003)
VIII-3-1(iv)		an assignment from DRAELOS Zoe, D. to COLGATE-PALMOLIVE COMPANY, dated 07 April 2003 (07.04.2003)
VIII-3-1(iv)		an assignment from VOLZ Elizabeth, D. to COLGATE-PALMOLIVE COMPANY, dated 15 April 2003 (15.04.2003)
VIII-3-1(ix)	This declaration is made for the purposes of:	all designations

PCT REQUEST

Original (for SUBMISSION)

IX	Check list	number of sheets	electronic file(s) attached
IX-1	Request (including declaration sheets)	6	-
IX-2	Description	13	-
IX-3	Claims	2	-
IX-4	Abstract	1	✓
IX-5	Drawings	0	-
IX-7	TOTAL	22	
	Accompanying items	paper document(s) attached	electronic file(s) attached
IX-8	Fee calculation sheet	✓	-
IX-17	PCT-SAFE physical media	-	✓
IX-19	Figure of the drawings which should accompany the abstract		
IX-20	Language of filing of the International application	English	
X-1	Signature of applicant, agent or common representative		
X-1-1	Name:	MIANO, Rosemary, M.	
X-1-2	Name of signatory		
X-1-3	Capacity		

FOR RECEIVING OFFICE USE ONLY

10-1	Date of actual receipt of the purported international application	
10-2	Drawings:	
10-2-1	Received	
10-2-2	Not received	
10-3	Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application	
10-4	Date of timely receipt of the required corrections under PCT Article 11(2)	
10-5	International Searching Authority	ISA/EP
10-6	Transmittal of search copy delayed until search fee is paid	

FOR INTERNATIONAL BUREAU USE ONLY

11-1	Date of receipt of the record copy by the International Bureau	
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METHOD OF USEBACKGROUND OF THE INVENTION

5 Dry skin is one of the most common skin conditions manifested by persons of both sexes and all ages. Dry skin is initially observed as an increase in the number of desquamated corneocytes present on the skin surface. These corneocytes appear as white dander on the skin of Caucasian individuals, but do not represent a significant cosmetic concern, since the background skin color is also light. This is
10 not the case in persons with darker colored skin types, such as Fitzpatrick types 4 or higher. Dry skin in darker pigmented individuals is known as ashen skin, since the pigmented skin scale appears gray, due to the presence of increased melanin in the desquamating corneocytes. Dry ashen skin, medically known as xerosis, is the result of decreased water content of the stratum corneum, which leads to abnormal
15 desquamation of corneocytes.

A new method has been discovered which provides a non-invasive, objective measurement of corneocyte scale of people with xerosis. Compositions for treating people with xerosis can be readily evaluated using this test. In this manner, a
20 composition has been found which effectively treats people with xerosis, ashen skin of those people having a Fitzpatrick type 4 or higher. This composition is not only effective during topical application but even has a residual effect after application of the composition is withdrawn from use.

25

SUMMARY OF THE INVENTION

30 A method for decreasing the level of skin ashiness in an individual with xerosis and having a Fitzpatrick type 4 or higher score comprising topically applying to the skin of said individual a composition having a cleansing surfactant or mixture of cleansing surfactants in quantity sufficient to cleanse the skin and a moisturizing component or mixture of components in quantities sufficient to decrease the level of said skin ashiness.

35 A further aspect of the invention is a method for assessing the presence of ashen skin on an individual having xerosis and a Fitzpatrick type 4 or higher score which comprises scraping the skin of said individual, collecting the loose dander accumulated, and counting the number of corneocytes.

DETAILED DESCRIPTION OF INVENTION

J6

Ashen skin is a term used to describe the grayish white powdery appearance of the skin having darker color skin type, such as having Fitzpatrick type 4 or higher, for example black individuals. As stated previously, because of the contrast in colors, ashen skin is a significant cosmetic issue in people with dark skin. The new test system disclosed here allows a quantitative and qualitative assessment of ashen skin because the desquamating corneocytes can now be analyzed both quantitatively and qualitatively. This can be accomplished in a simple manner by scraping the skin, collecting the scrapings and visually observing and/or observing through a dissecting microscope the desquamating corneocytes in a quantitative manner and a qualitative manner. Through this procedure, the efficacy of skin formulations can now be readily assessed for their effect on skin. These formulations can be assessed for their effect on normal skin to see if the formulation brings about ashen skin or the effect of a formulation on individuals who have ashen skin. Up until now, the state of the art system for evaluating the status of ashen skin was to make visual observation of the ashen skin. The skin scraping method presently disclosed provides a more thorough qualitative examination of the corneocytes and permits an accurate quantitative counting of the corneocytes.

Compositions which can have a positive effect on xerosis can now be evaluated utilizing this new and improved system. Moisturizing systems can be evaluated under this new system. A topical formation has been found which can be utilized in the managing of ashen skin: Interestingly, not only is skin ashiness reduced but there is also a measurable reduction in skin dryness and skin roughness. With the formulations, the positive effects are maintained for at least one week after termination of the application. This shows that there is a residual effect as well. The formulation is a rinse-off skin cleansing formulation comprising (a) at least one cleansing surfactant or a mixture of cleansing surfactants in quantities sufficient to cleanse the skin, (b) a hydrocarbonaceous substance in quantities sufficient to bring about reduction of skin ashiness in individuals having xerosis, the reduction as measured by a scraping test. The composition is rinsed from the skin with water after use in a time period of less than one minute, preferably less than 45, 30 or 15 seconds after application. This is in contrast to a lotion or cream (leave on composition) which is left on the skin as long as possible.

Any cleansing surfactant can be employed in the cleansing composition.

Cleansing surfactants which can be employed include: Soap, a long chain alkyl or alkenyl, branched or normal carboxylic acid salt such as sodium, potassium, ammonium or substituted ammonium salt, can be present in the composition as an example of an anionic surfactant. Exemplary of long chain alkyl or alkenyl are from about 8 to about 22 carbon atoms in length, specifically about 10 to about 20 carbon atoms in length, more specifically alkyl and most specifically normal, or normal with little branching. Small quantities of olefinic bond(s) may be present in the predominantly alkyl sections, particularly if the source of the "alkyl" group is obtained from a natural product such as tallow, coconut oil and the like.

Other cleansing surfactants can be present in the composition as well.

Examples of such surfactants are the anionic, amphoteric, nonionic and cationic surfactants. Examples of anionic surfactants include but are not limited to soaps, alkyl sulfates, anionic acyl sarcosinates, methyl acyl taurates, N-acyl glutamates, acyl isethionates, alkyl sulfosuccinates, alkyl phosphate esters, ethoxylated alkyl phosphate esters, trideceth sulfates, protein condensates, ethoxylated alkyl sulfates and the like.

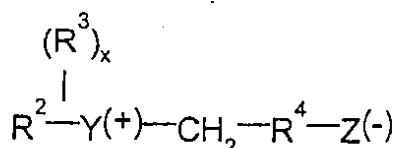
Alkyl chains for these surfactants are C_8 - C_{22} , preferably C_{10} - C_{18} , more preferably C_{12} - C_{14} .

Anionic non-soap surfactants can be exemplified by the alkali metal salts of organic sulfate having in their molecular structure an alkyl radical containing from about 8 to about 22 carbon atoms and a sulfonic acid or sulfuric acid ester radical (included in the term alkyl is the alkyl portion of higher acyl radicals). Preferred are the sodium, ammonium, potassium or triethanolamine alkyl sulfates, especially those obtained by sulfating the higher alcohols (C_8 - C_{18} carbon atoms), sodium coconut oil fatty acid monoglyceride sulfates and sulfonates; sodium or potassium salts of sulfuric acid esters of the reaction product of 1 mole of a higher fatty alcohol (e.g., tallow or coconut oil alcohols) and 1 to 12 moles of ethylene oxide; sodium or potassium salts of alkyl phenol ethylene oxide ether sulfate with 1 to 10 units of ethylene oxide per molecule and in which the alkyl radicals contain from 8 to 12 carbon atoms, sodium alkyl glyceryl ether sulfonates; the reaction product of fatty

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acids having from 10 to 22 carbon atoms esterified with isethionic acid and neutralized with sodium hydroxide; water soluble salts of condensation products of fatty acids with sarcosine; and others known in the art.

5 Zwitterionic surfactants can be exemplified by those which can be broadly described as derivatives of aliphatic quaternary ammonium, phosphonium, and sulfonium compounds, in which the aliphatic radicals can be straight chain or branched and wherein one of the aliphatic substituents contains from about 8 to 18 carbon atoms and one contains an anionic water-solubilizing group, e.g., carboxy, 10 sulfonate, sulfate, phosphate, or phosphonate. A general formula for these compounds is:



15 wherein R^2 contains an alkyl, alkenyl, or hydroxy alkyl radical of from about 8 to about 18 carbon atoms, from 0 to about 10 ethylene oxide moieties and from 0 to 1 glyceryl moiety; Y is selected from the group consisting of nitrogen, phosphorus, and sulfur atoms; R^3 is an alkyl or monohydroxyalkyl group containing 1 to about 3 20 carbon atoms; X is 1 when Y is a sulfur atom and 2 when Y is a nitrogen or phosphorus atom, R^4 is an alkylene or hydroxyalkylene of from 0 to about 4 carbon atoms and Z is a radical selected from the group consisting of carboxylate, sulfonate, sulfate, phosphonate, and phosphate groups.

25 Examples include: 4-[N,N-di(2-hydroxyethyl)-N-octadecylammonio]-butane-1-carboxylate; 5-[S-3-hydroxypropyl-S-hexadecylsulfonio]-3 hydroxypentane-1-sulfate; 3-[P,P-P-diethyl-P 3,6,9 trioxatetradecyl- phosphonio]-2-hydroxypropane-1-phosphate; 3-[N,N-dipropyl-N-3 dodecoxy-2-hydroxypropylammonio]-propane-1-phosphonate; 3-(N,N-di- methyl-N-hexadecylammonio) propane-1-sulfonate; 3- 30 (N,N-dimethyl-N-hexadecylammonio)-2-hydroxypropane-1-sulfonate; 4-(N,N-di(2-hydroxyethyl)-N-(2 hydroxydodecyl) ammonio]-butane-1-carboxylate; 3-[S-ethyl-S-(3-dodecoxy-2-hydroxypropyl)sulfonio]-propane-1-phosphate; 3-(P,P-dimethyl-P-dodecylphosphonio)-propane-1-phosphonate; and 5-[N,N-di(3-hydroxypropyl)-N-hexadecylammonio]-2-hydroxy-pentane-1-sulfate.

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Examples of amphoteric surfactants which can be used in the compositions of the present invention are those which can be broadly described as derivatives of aliphatic secondary and tertiary amines in which the aliphatic radical can be straight chain or branched and wherein one of the aliphatic substituents contains from about 8 to about 18 carbon atoms and one contains an anionic water solubilizing group, e.g., carboxy, sulfonate, sulfate, phosphate, or phosphonate. Examples of compounds falling within this definition are sodium 3-dodecylaminopropionate, sodium 3-dodecylaminopropane sulfonate, N-alkyltaurines, such as the one prepared by reacting dodecylamine with sodium isethionate according to the teaching of U.S. Patent No. 2,658,072, N-higher alkyl aspartic acids, such as those produced according to the teaching of U.S. Patent No. 2,438,091, and the products sold under the trade name "Miranol" and described in U.S. Patent No. 2,528,378. Other amphoterics such as betaines are also useful in the present composition.

Examples of betaines useful herein include the high alkyl betaines such as coco dimethyl carboxymethyl betaine, lauryl dimethyl carboxy-methyl betaine, lauryl dimethyl alpha-carboxyethyl betaine, cetyl dimethyl carboxymethyl betaine, lauryl bis-(2-hydroxyethyl)carboxy methyl betaine, stearyl bis-(2-hydroxypropyl) carboxymethyl betaine, oleyl dimethyl gamma-carboxypropyl betaine, lauryl bis-(2-hydroxypropyl) alpha-carboxyethyl betaine, etc. The sulfobetaines may be represented by coco dimethyl sulfopropyl betaine, stearyl dimethyl sulfopropyl betaine, amido betaines, amidosulfobetaines, and the like.

Many cationic surfactants are known to the art. By way of example, the following may be mentioned:

- stearyldimethylbenzyl ammonium chloride;
- dodecyltrimethylammonium chloride;
- nonylbenzylethyldimethyl ammonium nitrate;
- tetradecylpyridinium bromide;
- laurylpyridinium chloride;
- cetylpyridinium chloride
- laurylpyridinium chloride;
- laurylisoquinolium bromide;
- ditallow(Hydrogenated)dimethyl ammonium chloride;

- dilauryldimethyl ammonium chloride; and
- stearalkonium chloride.

Nonionic surfactants include those which can be broadly defined as compounds produced by the condensation of alkylene oxide groups (hydrophilic in nature) with an organic hydrophobic compound, which may be aliphatic or alkyl aromatic in nature. Examples of preferred classes of nonionic surfactants are:

1. The polyethylene oxide condensates of alkyl phenols, e.g., the condensation products of alkyl phenols having an alkyl group containing from about 6 to 12 carbon atoms in either a straight chain or branched chain configuration, with ethylene oxide, the said ethylene oxide being present in amounts equal to 10 to 60 moles of ethylene oxide per mole of alkyl phenol. The alkyl substituent in such compounds may be derived from polymerized propylene, diisobutylene, octane, or nonane, for example.

2. Those derived from the condensation of ethylene oxide with the product resulting from the reaction of propylene oxide and ethylene diamine products which may be varied in composition depending upon the balance between the hydrophobic and hydrophilic elements which is desired. For example, compounds containing from about 40% to about 80% polyoxyethylene by weight and having a molecular weight of from about 5,000 to about 11,000 resulting from the reaction of ethylene oxide groups with a hydrophobic base constituted of the reaction product of ethylene diamine and excess propylene oxide, said base having a molecular weight of the order of 2,500 to 3,000, are satisfactory.

3. The condensation product of aliphatic alcohols having from 8 to 18 carbon atoms, in either straight chain or branched chain configuration with ethylene oxide, e.g., a coconut alcohol ethylene oxide condensate having from 10 to 30 moles of ethylene oxide per mole of coconut alcohol, the coconut alcohol fraction having from 10 to 14 carbon atoms. Other ethylene oxide condensation products are ethoxylated fatty acid esters of polyhydric alcohols (e.g., Tween 20-polyoxyethylene (20) sorbitan monolaurate).

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4. Long chain tertiary amine oxides corresponding to the following general formula:



wherein R_1 contains an alkyl, alkenyl or monohydroxy alkyl radical of from about 8 to about 18 carbon atoms, from 0 to about 10 ethylene oxide moieties, and from 0 to 1 glyceryl moiety, and, R_2 and R_3 contain from 1 to about 3 carbon atoms and from 0 to about 1 hydroxy group, e.g., methyl, ethyl, propyl, hydroxy ethyl, or hydroxy propyl radicals. The arrow in the formula is a conventional representation of a semipolar bond. Examples of amine oxides suitable for use in this invention include

dimethyldodecylamine oxide, oleyl-di(2-hydroxyethyl) amine oxide, dimethyloctylamine oxide, dimethyldecylamine oxide, dimethyl-tetradecylamine oxide, 3,6,9 trioxaheptadecyldiethylamine oxide, di(2-hydroxyethyl)-tetradecylamine oxide, 2-dodecoxyethyldimethylamine oxide, 3-dodecoxy-2-hydroxypropyldi(3-hydroxypropyl)amine oxide, dimethyl- hexadecylamine oxide.

5. Long chain tertiary phosphine oxides corresponding to the following general formula:



wherein R contains an alkyl, alkenyl or monohydroxyalkyl radical ranging from 8 to 20 carbon atoms in chain length, from 0 to about 10 ethylene oxide moieties and from 0 to 1 glyceryl moiety and R' and R'' are each alkyl or mono-hydroxyalkyl groups containing from 1 to 3 carbon atoms. The arrow in the formula is a conventional representation of a semipolar bond. Examples of suitable phosphine

oxides are: dodecyldimethylphosphine oxide, tetra-decylmethylethylphosphine oxide, 3,6,9-trioxaoctadecyldimethylphosphine oxide, cetyldimethylphosphine oxide, 3-dodecoxy-2-hydroxypropyldi(2-hydroxyethyl) phosphine oxide, stearyldimethylphosphine oxide, cetylethyl propylphosphine oxide, oleyldiethylphosphine oxide, dodecyldiethylphosphine oxide, tetra-decyldiethylphosphine oxide, dodecyldipropylphosphine oxide, dodecyl-di(hydroxymethyl)phosphine oxide, dodecyldi(2-hydroxyethyl)phosphine oxide, tetradecylmethyl-2-hydroxypropylphosphine oxide, oleyldimethylphosphine oxide, 2-hydroxydodecyldimethylphosphine oxide.

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6. Long chain dialkyl sulfoxides containing one short chain alkyl or hydroxy alkyl radical of 1 to about 3 carbon atoms (usually methyl) and one long hydrophobic chain which contain alkyl, alkenyl, hydroxy alkyl, or keto alkyl radicals containing from about 8 to about 20 carbon atoms, from 0 to about 10 ethylene oxide moieties and from 0 to 1 glyceryl moiety. Examples include: octadecyl methyl sulfoxide, 2-ketotridecyl methyl sulfoxide, 3,6,9-trioxaoctadecyl 2-hydroxyethyl sulfoxide, dodecyl methyl sulfoxide, oleyl 3-hydroxypropyl sulfoxide, tetradecyl methyl sulfoxide, 3-methoxytridecylmethyl sulfoxide, 3-hydroxytridecyl methyl sulfoxide, 3-hydroxy-4-dodecoxybutyl methyl sulfoxide.

7. Alkyl polyglycosides wherein the alkyl group is about 10 to about 20 carbon atoms, preferably about 10 to about 18 carbon atoms and the degree of polymerization of the glycoside is from about 1 to about 3, preferably about 1.3 to about 2.0.

Since dry ashen skin, xerosis, seems to be the result of decreased water content of the stratum corneum which leads to abnormal desquamation of corneocytes, the presence of a hydrocarbonaceous substance seems to bring alleviation of the problem through moisturization of the skin. Substances which bring about reduction of skin ashiness include long chain alkanes, long chain alkenes, mineral oils, petrolatum, polyalpha olefins, microcrystalline waxes, paraffin wax, beeswax and natural waxes derived from vegetables and mixtures thereof.

Other materials can also be in the composition as well. Examples of these components are coloring agents, UV stabilizers, antibacterial agents, thickeners, gelling agents, additional emollients and the like. Preferred

components for reasons including as additional skin feel include cationic polymers. Examples of such cationic materials include the various polyquats known to the art which include but are not limited to Polyquaternium 2 (a polyelectrolyte formed from quaternized ioenes), Polyquaternium 4 (hydroxycellulose diallyldimethyl ammonium chloride), Polyquaternium 5 (acrylamide/ β -methacryloxyethyltrimethyl ammonium methosulfate), Polyquaternium 6 and 7 (homopolymer of dimethyl diallyl ammonium chloride and the copolymer of dimethyl diallyl ammonium chloride with acrylamide), Polyquaternium 8 (methyl and stearyl dimethylaminoethyl methacrylate

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quaternized with dimethylsulfate), Polyquaternium 10 (1-hydroxypropyl trimethyl ammonium chloride ethers of hydroxyethyl cellulose), Polyquaternium 11 (quaternized PVP and dimethylaminoethyl methacrylate), Polyquaternium 16 (copolymer of PVP/methyl vinylimidazoline), Polyquaternium 17 and 18

- 5 (polyelectrolyte formed from quaternized ioenes), Polyquaternium 19 (a vinyl alcohol hydroxypropyl amine salt), Polyquaternium 24 (polymeric quaternized ammonium salt of hydroxymethylcellulose and lauryl dimethyl ammonium substituted epoxide), Polyquaternium 27 (polyelectrolyte formed from quaternized ioenes). Other cationic materials include Polycare 133 (a polymethacrylamideopropyl trimonium chloride from Rhone-Poulenc). These materials are known to be the type that neutralizes a negative charge, such as on skin.
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Further emollients include long chain saturated or unsaturated fatty acids such as lauric, oleic, myristic, palmitic and stearic, cocoa butter, shea butter, lanolin, and silicones such as polydimethyl siloxane.

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The physical form of the composition can be a solid such as a bar, a liquid or gel or a mousse, foam, aerosol or spray. The active portion of the aerosol spray, foam or mousse is generally a liquid or gel which has a separate delivery system. In a solid, the amount of cleansing surfactant is generally at least about 40, 50, or 60 wt. % with a maximum of no more than about 80, 85 or 92 wt. % of the composition. Generally, these are in the shape of a bar for skin cleansing. For the liquid or gel, a minimum of the skin cleansing surfactant or mixtures of surfactants is about 4 wt. % of liquid or gel composition. Preferred minimums are about 6, 8, or 10 wt. %. For the maximum quantities, there is generally less than about 35, 25, 20 or 15 wt. %.

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With respect to additional emollients when employed, there is a minimum of about 0.1 wt. %, 0.2, 0.4 or 0.5 wt. % of a solid composition and a maximum or no more than about 8, 10 or 12 wt. % of the composition. With respect to a liquid or gel there is a minimum of about 0.05 wt. %, preferably about 0.1, 0.2, or 0.3 wt. %. A maximum of no more than about 25, 20, 15 or 10 wt. % can be employed.

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Following is a description of the test method and the results using a soap bar having the following composition:

Component	Wt. %
Soap	78
Petrolatum	3.5
Silicone	0.1
Polyquat 6	0.12
Fragrance	1.0
Antioxidants, Preservatives, etc.	2.7
Water, q.s.	

Forty male or female subjects above the age of consent with Fitzpatrick skin types 4 or higher were enrolled in a 2-week study to determine the effect of a novel soap formulation on the reduction of the appearance of ashen skin. The subjects were soap users and possessed ashen skin indicating skin dryness, but no evidence of dermatitis or other skin disease. Subjects underwent a baseline skin assessment by an investigator, skin scrapings (described below) and conducted self skin assessments of ashen skin, roughness and dryness (Table 1). Skin scrapings were used to visually assess the amount of skin scales present.

Table 1
Assessment Scale for Ashen Skin,
Roughness and Dryness

Score	Assessment Definition
0	None
1	Mild Level
2	Moderate Level
3	Severe Level

All forty subjects were given the soap bar to use for one week. After one week of use, thirty (30) subjects remained on the above bar while ten (10) subjects switched back to their normal soap. The subjects were randomly assigned 10 subjects to Group A and 30 to Group B. In order to keep the study blinded, the medical investigator did not have knowledge of subject placement into the groups

until the end of the study. Subjects returned once a week at the end of Weeks 1 and 2 for evaluation of their skin condition.

Skin scrapings were used to visually assess the amount of skin scale present. The side of a microscope slide was gently stroked across the skin of the inner right forearm (3 cm below the antecubital fossa) ten times to collect loose dander. The number of corneocytes obtained was recorded, and the quality of the skin scale was assessed with the aid of a dissecting microscope. This provided a noninvasive, objective measurement of the amount of scale present on the skin surface.

Statistical Analysis

A paired t-test was used to assess the skin scrapings investigator and patient data for Baseline and Week 1 comparisons. A paired t-test was used to compare the Baseline and Week 2 data for the group of 30 subjects. In addition, a 2 sample unequal t-test was used when comparing the Group of 30 to the Group of 10 at the end of Week 2.

Results and Discussion

Skin Scale Scrapings

After one week of using the novel bar, there was a statistically significant reduction in the number of skin scales on the microscope slide (See Table 2).

Table 2

Week 1

Reduction in Skin Scales for Novel Soap Bar

	Baseline n = 40	Week 1 n = 40
Average Cell Count	18.88 ± 2.05	11.50 ± 1.56
Paired t-Test vs. Baseline		<0.001

For Week 2, the number of corneocytes continued to decrease for those remaining on the test bar (Table 3).

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Table 3
Week 2
Reduction in Skin Scales for Novel Soap Bar

	Baseline n = 30	Week 1 n = 30
Average Cell Count	12.03 ± 1.56	6.90 ± 0.81
Paired t-Test vs. Baseline		<0.001

For the subjects that returned to their normal product, there was an increase in skin scales (Table 4).

Table 4
Skin Scales Comparison at Week 2

Test Product	Novel Bar	Normal Bar
Assessment Parameter	Skin Scales	Skin Scales
Number of Subjects	n = 30	n = 10
Average Cell Count	6.90 ± 0.81	13.80 ± 1.32
2-Sample Unequal t-Test		0.003

However, the counts at Week 2 were still lower than baseline and greater than the number collected from the users of the test soap bar. This would indicate that there was a residual benefit of the test bar even after subjects resumed use of their normal bar.

Counts were made of the larger flakes on the glass slide, ignoring debris from skin scale fragments, hairs, clothing, etc. At baseline, subjects demonstrated large cohesive skin scale flakes. These large flakes probably accounted for the appearance of ashen skin present at study entry. At the end of Week 1, not only was there reductions in the number of cell scales but the skin scales were reduced to a fine powder. The smaller size of the corneocyte debris probably accounted for the visible improvement in ashen skin. It is important to note that the group that

continued to use the test soap for Week 2 demonstrated a further reduction in skin scales (Table 3).

Skin Ashiness

As observed by the medical investigator's and subject's self-assessments, there was a statistically significant reduction from baseline in the observed level of skin ashiness at the end of Week 1. The 30 subjects that remained on the test soap bar continued to show a reduction in their ashiness levels for Week 2 as assessed by the medical investigator and subjects. The 10 subjects that returned to using their normal product for Week 2 showed an increase in skin ashiness as compared to Week 1. The subject's self-assessment indicates a return to their baseline level of ashiness. However, the medical investigator's assessment shows an increase for Week 2 but not to the baseline levels. Statistical comparison showed that at Week 2 there was significantly less ashiness in those subjects that remained on the test soap bar than those that returned to their normal product.

Skin Dryness

For both Weeks 1 and 2 there was a statistically significant reduction from baseline in the overall level of skin dryness as assessed by the medical investigator and the subject's self-assessments for the novel soap bar users. The dryness levels continued to decrease for those subjects that remained on the novel soap bar. The development of dryness for Week 2 follows the same pattern that was observed for ashiness by both the medical investigator and the subjects: Increase in dryness upon returning to their normal product. However, the subjects' self-assessment showed skin dryness level increased to the baseline level. At week 2, a 2-sample unequal t-test analysis indicated significantly less dryness in subjects that continued to use the novel soap bar than those that returned to their normal product.

Skin Roughness

Assessment for skin roughness approximated the same results and had the same general trends as for skin dryness.

CLAIMS

1. A method for decreasing the level of skin ashiness in an individual with xerosis and having a Fitzpatrick type 4 or higher score comprising topically applying to the skin of said individual a composition (a) having a cleansing surfactant or mixture of cleansing surfactants in quantity sufficient to cleanse the skin and (b) a moisturizing component or mixture of components in quantities sufficient to decrease the level of said skin ashiness.
2. The method in accordance with claim 1 wherein the composition is a rinse off composition and is rinsed off from the skin with water.
3. The method in accordance with claim 1 wherein the decrease in the level of skin ashiness can be measured by a scraping test.
4. The method in accordance with claim 1 wherein an anionic surfactant is present.
5. The method in accordance with claim 4 wherein the composition is a bar.
6. The method in accordance with claim 4 wherein the composition is a liquid or gel.
7. The method in accordance with claim 1 wherein the moisturizing component is selected from the group consisting of long chain alkanes, long chain alkenes, mineral oils, polyalpha olefins, petrolatum and mixtures thereof.
8. The method in accordance with claim 8 wherein the moisturizing component is petrolatum.
9. The method in accordance with claim 7 wherein the composition is a solid.
10. The method in accordance with claim 9 wherein the moisturizing component is petrolatum.
11. The method in accordance with claim 7 wherein the composition is a liquid or gel.
12. The method in accordance with claim 11 wherein the moisturizing component is petrolatum.
13. The method in accordance with claim 7 wherein there is an additional emollient present in the composition.
14. The method in accordance with claim 13 wherein the additional emollient is silicone.
15. The method in accordance with claim 1 wherein after the composition is no longer topically applied, the decrease in skin ashiness continues for at least one week.
16. A method for assessing the presence of ashen skin on an individual having xerosis and a Fitzpatrick type 4 or higher score which comprises
 - (a) scraping the skin of said individual,
 - (b) collecting the loose dander accumulated, and
 - (c) counting the number of corneocytes.

17. The method in accordance with claim 16 wherein the corneocytes are counted visually.

18. The method in accordance with claim 16 wherein the corneocytes are counted with a microscope.

ABSTRACT

5 A method for decreasing the level of skin ashiness in an individual with xerosis and having a Fitzpatrick type 4 or higher score comprising topically applying to the skin of said individual a composition (a) having a cleansing surfactant or mixture of cleansing surfactants in quantity sufficient to cleanse the skin and (b) a moisturizing component or mixture of components in quantities sufficient to decrease the level of said skin ashiness.

GENERAL POWER OF ATTORNEY

(for several international applications filed under the Patent Cooperation Treaty)

(PCT Rule 90.5)

The undersigned person(s):

(Family name followed by given name; for a full legal entity, full official designation. The address must include postal code and name of country.)

COLGATE-PALMOLIVE COMPANY
300 Park Avenue
New York, New York 10022
United States of America

hereby appoint(s) the following person as:



agent



common representative

Name and address

(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

Martin B. Barancik, Henry S. Goldfine, Bernard Lieberman, Michael J. McGreal, Rosemary M. Miano, Richard E. Nanfeldt, Ellen Park and Clifford Wilkins of

COLGATE-PALMOLIVE COMPANY
909 River Road
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United States of America

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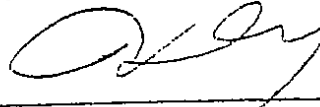
in connection with any and all international applications filed by the undersigned with the following Office

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Andrew D. Hendry
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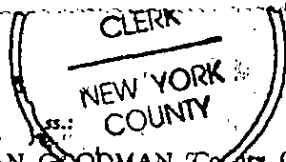
Date: October 16, 2003

PCT (ANNEX - FEE CALCULATION SHEET)

Original (for SUBMISSION)
(This sheet is not part of and does not count as a sheet of the international application)

0	For receiving Office use only		
0-1	International Application No.		
0-2	Date stamp of the receiving Office		
0-4	Form PCT/RO/101 (Annex) PCT Fee Calculation Sheet		
0-4-1	Prepared Using	PCT-SAFE [EASY model] Version 3.50 (Build 0002.153)	
0-9	Applicant's or agent's file reference		7116-00
2	Applicant		COLGATE-PALMOLIVE COMPANY
12	Calculation of prescribed fees		
		fee amount/multiplier	Total amounts (USD)
12-1	Transmittal fee T	⇒	300
12-2-1	Search fee S	⇒	1818
12-2-2	International search to be carried out by	EP	
12-3	International filing fee (first 30 sheets) I1	1035	
12-4	Remaining sheets	0	
12-5	Additional amount (X)	0	
12-6	Total additional amount I2	0	
12-7	I1 + I2 = I	1035	
12-12	EASY Filing reduction R	-74	
12-13	Total International filing fee (I-R) I	⇒	961
12-14	Fee for priority document		
	Number of priority documents requested	1	
12-15	Fee per document (X)	20	
12-16	Total priority document fee: P	⇒	20
12-17	TOTAL FEES PAYABLE (T+S+I+P)		⇒ 3099
12-19	Mode of payment		authorization to charge deposit account
12-20	Deposit account instructions		
	The receiving Office	United States Patent and Trademark Office (USPTO) (RO/US)	
12-20-1	Authorization to charge the total fees indicated above.	✓	
12-20-2	Authorization to charge any deficiency or credit any overpayment in the total fees indicated above.	✓	
12-20-3	Authorization to charge the fee for priority document.	✓	
12-21	Deposit account No.		03-2457
12-22	Date		10 February 2004 (10.02.2004)
12-23	Name and signature		DUNNE, Elizabeth, M. <i>Elizabeth M Dunne</i>

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252373

Form 1

County of New York

I, NORMAN GOODMAN, County Clerk and Clerk of the Supreme Court of the State of New York, in and for the County of New York, a Court of Record, having by law a seal, DO HEREBY CERTIFY pursuant to the Executive Law of the State of New York, that

Rosie S. Dizon

whose name is subscribed to the annexed affidavit, deposition, certificate of acknowledgment or proof, was at the time of taking the same a NOTARY PUBLIC in and for the State of New York duly commissioned, sworn and qualified to act as such; that pursuant to law, a commission or a certificate of his official character, with his autograph signature has been filed in my office; that at the time of taking such proof, acknowledgment or oath, he was duly authorized to take the same; that I am well acquainted with the handwriting of such NOTARY PUBLIC or have compared the signature on the annexed instrument with his autograph signature deposited in my office, and I believe that such signature is genuine.

IN WITNESS WHEREOF, I have hereunto set my hand affixed my official seal this

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County Clerk and Clerk of the Supreme Court, New York County

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(Convention de La Haye du 5 Octobre 1961)

1. Country: **United States of America**

This public document

2. has been signed by **Norman Goodman**

3. acting in the capacity of **County Clerk**

4. bears the seal/stamp of the county of **New York**

Certified

5. At New York, New York 6. the 30th day of October 2001

7. by Special Deputy Secretary of State, State of New York

8. No. NYC-9786540B

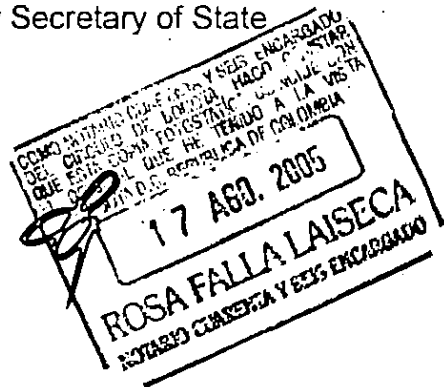
9. Seal/Stamp 10. Signature



Aqil M. Qureshi

Special Deputy Secretary of State

04135595.RSL (REV. 2/8/98)



Brigard & Castro

SANTA FE DE BOGOTA - COLOMBIA

PODER

POWER OF ATTORNEY

Yo (nosotros)

domiciliado(s) en

Nombro(amos) a: RAMIRO CASTRO DUQUE y/o JUAN PABLO CADENA SARMIENTO y/o BEATRIZ JARAMILLO S.

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hoy de

Firma

Nombre

VICE PRESIDENT &
ASSOCIATE GENERAL COUNSEL
TRADEMARK

I (We)

COLGATE-PALMOLIVE COMPANY, a Delaware corporation, of 300 Park Avenue, New York, New York 10022, U. S. A.

Hereby appoint RAMIRO CASTRO DUQUE and/or JUAN PABLO CADENA SARMIENTO and/or BEATRIZ JARAMILLO S.

of Santafé de Bogotá, Colombia, my (our) true and lawful attorneys with special, ample and sufficient power to obtain from the Colombian administrative, judicial and police offices and authorities, in any instance, privileges of patents of invention, registration of trademarks, industrial designs and utility models; registration of commercial names and emblems, registration of copyright and contracts related thereto, certificates of obtainers of vegetable varieties, as well as extensions, renewals and recordal of assignments and changes of name and domicile related to the above; to prepare, prosecute and register licenses of any kind; to act as plaintiff or defendant in any instance or recourse, and before any judge, corporation, public official or authority in judicial, administrative and police actions, such as: oppositions to the registration of trademarks; caducity, cancellation and nullity actions; claim actions derived from the obtaining or exploitation of licenses, action of unfair competition; penal demands, actions of indemnities for damages; claims or observations on patent applications, models, industrial designs and utility models; in the exercise of preventive measures; and in other actions or similar proceedings.

To that effect they are hereby empowered to file applications, formulate descriptions, amendments, protests, declarations, oppositions, cancellations, nullities, appeals and claims; to pay taxes, quotas and assessments prescribed by law, renounce or waive the rights granted or in the process of granting; to receive all kind of documents, and valuables, giving the respective release of receipt, and, in general, to take before said authorities the necessary steps to such effect, and any measures that they may deem pertinent to the safeguard of my (our) interest(s) with all the other necessary legal powers.

This power includes the faculty to ratify or confirm desist, settle and compromise on my (our) behalf, and to substitute this power in whole or in part and to revoke substitutions. At the same time I (We) hereby appoint RAMIRO CASTRO DUQUE and/or JUAN PABLO CADENA SARMIENTO and/or BEATRIZ JARAMILLO S.

domiciled in Carrera 7 No. 16-56 Piso 9, my (our) attorney(s) in fact, with powers to receive notifications and to designate judicial and extrajudicial attorneys.

Granted and signed in

New York, N.Y.

this OCT 29 2001 day of

Signature

Name

ROSA FALLA LAISECA
NOTARIO CUARENTA Y SEIS ENCARGADO

CERTIFICADO NOTARIAL (SOCIEDAD)

NOTARIAL CERTIFICATE (CORPORATION)

Hoy, de de
personalmente compareció ante mí

a quien conozco, y de quien me consta que firmó el anterior documento, debidamente juramentado declaró y dijo que él es

de

Sociedad legalmente constituida para un periodo de duración que aún no ha terminado; que el declarante está autorizado por dicha compañía para conferir este poder; que el sello estampado por él al pie de tal poder, en nombre y representación de la expresada compañía, es el sello oficial de ella; y que el objeto para el cual se confiere este instrumento está comprendido dentro del de la sociedad.

El suscrito Notario hace constar que tuvo a la vista las pruebas de la existencia de la sociedad.

Estado de
con fecha

y que quien confiere el presente poder es su representante.

On this OCT 29 2001 day of of
personally appeared before me

SCOTT E THOMPSON

to me known, and known to me to be the person who signed the foregoing instrument who being by me duly sworn did depose and say that he (she) is the

VICE PRESIDENT &

ASSOCIATE GENERAL COUNSEL

TRADEMARK

COLGATE-PALMOLIVE COMPANY

Which is legally constituted for a term not yet expired, that deponent is authorized by said Company to confer this Power of Attorney: that the seal affixed hereunto by the deponent in the name and on behalf of said Corporation is the corporate seal thereof; and that the purpose for which this instrument is granted is included within the corporate purpose of company.

The undersigned Notary Public attests that he has seen the documents that prove the existence of the company.

State of Delaware
under date of May 13, 1997

and that he (she) who grants the present power of attorney is its Representative.

Notario Público (sello)

Notary Public (seal)

CERTIFICADO NOTARIAL
PERSONA NATURAL

COUNTY

ROSIE S. DIZON
Notary Public, State of New York
No. 31-494117
Qualified in New York County
Commission Expires Aug. 15, 2002

Hoy de de , compareció(eron)
ante mí

On this OCT 29 2001 day of of
personally appeared before me

SCOTT E THOMPSON

a quien (es) conozco y me consta que es(son) la(s) persona(s) firmante(s) del documento que precade y quien(es) declara(n) que otorgan el mismo para los fines y propósitos que en él se expresan.

who is(are) known to me and who I attest, executed the foregoing document and he (they) declared he (they) grant(s) the document for the uses and purposes therein expressed.

Notario Público

Notary Public (Seal)

LEGALIZACION POR APOSTILLA ES REQUERIDA

LEGALIZATION BY APOSTILLE IS REQUIRED
ROSIE S. DIZON
Notary Public, State of New York
No. 31-494117
Qualified in New York County
Commission Expires Aug. 15, 2002

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APOSTILLE

(Convención de La Haya del 5 de Octubre de 1961)

1. País: ESTADOS UNIDOS DE AMERICA
Este documento público
2. ha sido firmado por **Norman Goodman**
3. actuando en capacidad de **Oficial del Condado**
4. lleva el sello/timbre del condado de **New York**

CERTIFICADO

5. en New York, New York
6. el 30 de Octubre de 2001
7. por Secretario de Estado Encargado Especial, Estado de New York
8. No. NYC-9786540B
9. Sello/Timbre
10. Firma
(Firma)
Aquil M. Qureshi
Secretario de Estado Encargado Especial





252373

Rosie S. Dizon

TARIFA PAGADA \$3.00

Oficial del Condado y Oficial de la Corte Suprema, Condado de New York



SUPERINDUSTRIA Y COMERCIO

Radicacion : 0508775 00000000

Folios: 78

Fecha (AM): 2005-09-01 16:59:28

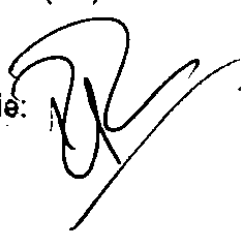
Tramite : 011 PAT-PAVENI 378 FASE MACI 411 PRESENTAC

Dependencia: 2000 DIVISION DE NUEVAS CREACIONES

REQUISITOS NECESARIOS PARA PRESENTACION Y AGILIZACION DEL TRAMITE

	USUARIO	RADICADOR
☒ PATENTE DE INVENCION	()	()
Indicacion de que se solicita la concesion de una patente.	()	()
Datos de identificacion del solicitante o de la persona que se presenta la solicitud.	()	()
Descripcion de la invencion.	()	()
Dibujos de ser estos pertinentes.	()	()
Comprobante de Pago de las tasas establecidas.	()	()
☐ COMPLETA ()	INCOMPLETA ()	()
☐ DISEÑO INDUSTRIAL ()		
- Indicacion de que se solicita el registro de Diseño Industrial	()	()
- Datos de identificacion del solicitante o de la persona que presenta la solicitud.	()	()
- Representacion grafica o fotografica del Diseño Industrial o muestra del Material que incorpora el diseno.	()	()
Comprobante de pago de las tasas establecidas	()	()
COMPLETA ()	INCOMPLETA ()	()
☐ ESQUEMA DE TRAZADO ()		
- Indicacion de que solicita el registro de un Esquema de trazado.	()	()
- Datos de identificacion del solicitante o de la persona que presenta La solicitud:	()	()
Representacion grafica del esquema de trazado	()	()
Comprobante de pago de las tasas establecidas.	()	()
COMPLETA ()	INCOMPLETA ()	()

Firma Responsable:



Fecha:



GAVIRI A

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ORGANIZACION ELECTORAL
REGISTRADURIA NACIONAL DEL ESTADO CIVIL

REGISTRO CIVIL DE DEFUNCION

Indicativo
Serial

5562241

Datos de la oficina de registro											
Clase de oficina:	Registraduria	Notaria	☒	Consulado		Corregimiento		Insp. de Policía		Código	9795
País - Departamento - Municipio - Corregimiento o/o Inspección de Policía											
COLOMBIA CUNDINAMARCA BOGOTA D.C. NOTARIA 32.											

Datos del inscrito											
Apellidos y nombres completos											
CASTRO DUQUE RAMIRO											
Documento de identificación (Clase y número)										Sexo (en Letras)	
C.C. No. 170322 DE BOGOTA										MASCULINO	

Datos de la defunción												
Lugar de la Defunción: País - Departamento - Municipio - Corregimiento o/o Inspección de Policía												
COLOMBIA CUNDINAMARCA BOGOTA D.C.												
Fecha de la defunción						Hora		Número de certificado de defunción				
Año	2	0	0	4	Mes	1	0	Día	3	0	04:10 PM	A- 2094375.
Presunción de muerte												
Juzgado que profiere la sentencia						Fecha de la sentencia						
-----						Año Mes Día						
Documento presentado						Nombre y cargo del funcionario						
Autorización Judicial ☐ Certificado Médico ☒						ANDRES DIAZ CAMPOS.- R.M. No. 79982662						

Datos del denunciante											
Apellidos y nombres completos											
EDGAR DAVID REGINO II.											
Documento de identificación (Clase y número)										Firma	
C.C. No. 15.030.154 DE LORICA/ CORDOBA											

Primer testigo											
Apellidos y nombres completos											

Documento de identificación (Clase y número)										Firma	

Segundo testigo											
Apellidos y nombres completos											

Documento de identificación (Clase y número)										Firma	

Fecha de inscripción												
Año	2	0	0	4	Mes	1	1	Día	0	2	Nombre y firma del funcionario que autoriza	
										BLANCA ROSA ELENA RESTREPO		

PADRES: ALFONSO CASTRO											
MERCEDES DUQUE											
ESPACIO PARA NOTAS											

ORIGINAL PARA LA OFICINA DE REGISTRO

NOTARIA 32

DEL CÍRCULO DE SANTA FE DE BOGOTÁ, D.C.

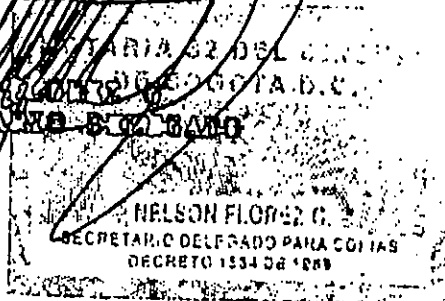
Germán Eleázar Moreno L.
Notario

COMO SECRETARIO DELEGADO DE LA NOTARIA TREINTA Y DOS (32) DEL
CÍRCULO DE BOGOTÁ

CERTIFICO QUE:

La presente acta es fiel copia del original tomada del registro
civil de defunciones serial indicativo número: 5562201
que expido en la ciudad de Bogotá D.C. hoy: 05 NOV. 2004

SECRETARIO DELEGADO



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REPUBLICA DE COLOMBIA
SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

Bogotá,
2020

Doctor(a)
CADENA SARMIENTO JUAN PABLO
Apoderado(a) y/o Representante de
COLGATE PALMOLIVE COMPANY

REFERENCIA	Radicación No.	5 87775
	Solicitud internacional	US2004/003944
	Fecha inicio fase nacional	10/09/2005
	Trámite	11
	Evento	378
	Actuación	430
	Oficio No.	10659

Como resultado del examen de forma, realizado con fundamento en el artículo 38 de la Decisión 486 de la Comisión de la Comunidad Andina, artículo 27 del Tratado de Cooperación en Materia de Patentes (PCT), regla 51 bis del Reglamento y Circular Única de la Superintendencia de Industria y Comercio, se le comunica que:

1. La solicitud no contiene la copia del documento en que consta la cesión del derecho a la patente del inventor al solicitante o a su causante. (Art. 26-k) Decisión 486.

En cumplimiento de lo dispuesto por el artículo 39 de la Decisión 486, se le requiere para que dentro del término de dos meses siguientes a la fecha de notificación del presente oficio, complete los requisitos anteriormente enunciados. En caso de no dar cumplimiento al presente requerimiento, la solicitud se considerará abandonada y perderá su prelación.

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

ALIX CARMENZA CESPEDES DE VERGEL
Jefe de la división de Nuevas Creaciones

El anterior requerimiento fue notificado por fijación en lista de fecha 11 NOV. 2005
adpal