

SEÑORES

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
CIUDAD

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
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Ref.: Asunto: No. de Radicación : 05 20729
Trámite: Patente de Invención
Evento: Registro
Título: UNA COMPOSICION DE LOCION
SUAVIZANTE, LUBRICANTE Y
ANTIBACTERIAL Y EL PAPEL TISU QUE LA
CONTIENE
Titular: FAMILIA S.A

ANEXO A EXPEDIENTE

MAURICIO JARAMILLO C, abogado en ejercicio, portador de la cédula de ciudadanía número 80'421,942 de Usaquén, y de la Tarjeta Profesional No. 74,555 del Consejo Superior de la Judicatura, actuando en mi carácter de apoderado del FAMILIA S.A., por medio del presente escrito me permito anexar al expediente el siguiente documento, con el fin de continuar con el trámite pertinente:

- Comprobante de pago por concepto de cancelación de examen de patentabilidad por valor de **TRESCIENTOS OCHENTA Y OCHO MIL PESOS (\$388.000)**.

NOTIFICACIONES

Informo que mi representado y el suscrito recibiremos las notificaciones en la secretaría de su despacho o en mi oficina de abogados, situada en la carrera 9 # 73-24 de Bogotá D.C., teléfonos 3107055 y 3105066, y fax 3106646.

Atentamente,

MAURICIO JARAMILLO C.
C.C. No. 80'421,942 de Usaquén
T.P. No. 74,555 del C.S.J.

Adjunto: lo anunciado.

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FAMILIA
3028

387

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

NIT : 800176089-2

CERTIFICACION DE EXCEDENTE : 06 - 94,739
FECHA : DICIEMBRE 12 DE 2006

***** CONSIGNACION *****

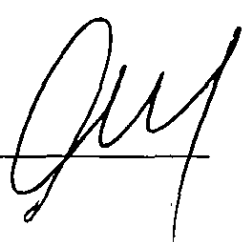
DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PGO	Vr. PAGO
GOMEZ PINZON Y ASOCIADOS CONSIGNACION		BANCO POPULAR	050-00110-6	45283134	07/12/2006	4,500,200.00

***** CONCEPTO *****

CANT.	RENTISTICO	CONCEPTO	TOTAL CONCEPTO
1	50005-01-09	OTROS SERVICIOS DE PROPIEDAD I	
		99 OTROS SERVICIOS ADMINISTRATIVOS	129,000.00
		TOTAL :	\$ 129,000.00

SON: CIENTO VEINTINUEVE MIL PESOS

RESPONSABLE :



RECIBO DE CAJA APLICADO AL EXPEDIENTE No. _____

ESTA CERTIFICACION DE EXCEDENTE DE PAGO SOLO PODRA SER UTILIZADA

050
Familia
3078

39-3
39

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

NIT : 800176089-2

CERTIFICACION DE EXCEDENTE : 06 - 94,743
FECHA : DICIEMBRE 12 DE 2006

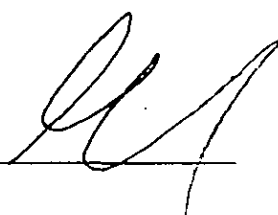
***** CONSIGNACION *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PGO	Vr. PAGO
GOMEZ PINZON Y ASOCIADOS CONSIGNACION		BANCO POPULAR	050-00110-8	36048613	06/12/2006	1,312,000.00

***** CONCEPTO *****

CANT.	RENTISTICO	CONCEPTO	TOTAL CONCEPTO
1	50005-01-09	OTROS SERVICIOS DE PROPIEDAD I	
		99 OTROS SERVICIOS ADMINISTRATIVOS	259,000.00
		TOTAL :	\$ 259,000.00

SON: DOSCIENTOS CINCUENTA Y NUEVE MIL PESOS

RESPONSABLE : 

RECIBO DE CAJA APLICADO AL EXPEDIENTE No. _____

40

DIVISION DE NUEVAS CREACIONES

RADICACIÓN EXPEDIENTE No. 05- 20729

**EL EXTRACTO DE LA PRESENTE SOLICITUD DE PATENTE DE INVENCION,
FUE PUBLICADO EN LA GACETA DE PROPIEDAD INDUSTRIAL No 568, DE
FECHA 29 DE SEPTIEMBRE DE 2006, EL TERMINO HABIL SEÑALADO POR
LA LEY EXPIRA EL 29 DE DICIEMBRE DE 2006.**

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

SE PRESENTARON OPOSICIONES POR PARTE DE TERCEROS.

SI ☐

NO ☒



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : A01N 25/34, A47K 10/16	A1	(11) International Publication Number: WO 99/45771 (43) International Publication Date: 16 September 1999 (16.09.99)
(21) International Application Number: PCT/US99/04221 (22) International Filing Date: 26 February 1999 (26.02.99) (30) Priority Data: 09/041,231 12 March 1998 (12.03.98) US (71) Applicant: THE PROCTER & GAMBLE COMPANY [US/US]; One Procter & Gamble Plaza, Cincinnati, OH 45202 (US). (72) Inventors: KLOFTA, Thomas, James; 10404 Hopewell Drive, Cincinnati, OH 45249 (US). STEINHARDT, Mark, John; 8387 Chesney Lane, Cincinnati, OH 45249 (US). (74) Agents: REED, T., David et al.; The Procter & Gamble Company, 5299 Spring Grove Avenue, Cincinnati, OH 45217-1087 (US).	(81) Designated States: AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), EE, EE (Utility model), ES, FI, FI (Utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published With international search report.	
(54) Title: TISSUE PAPER HAVING ANTIMICROBIAL SKIN LOTION (57) Abstract An anhydrous lotion composition for killing viruses and bacteria in addition to imparting a soft, lubricious, lotion-like feel when applied to tissue paper and tissue paper treated with such lotion compositions are disclosed. The antiviral action of the lotion is due to the addition of an organic acid such as citric acid or salicylic acid. The antibacterial action is due to the addition of antibacterial agents such as TRICLOSAN®. The solubilization of the antiviral and antibacterial agents within the lotion matrix is aided by the addition of hydrophilic solvents and hydrophilic surfactants. The lubricious lotions also contain a plastic or fluid skin conditioning agent such as petrolatum, an optional immobilizing agent such as a fatty alcohol or fatty acid to immobilize the skin conditioning agent on the surface of the tissue paper web and a hydrophilic surfactant to improve wettability when applied to toilet tissue. Because less lotion is required to impart the desired soft, lotion-like feel benefits, detrimental effects on the tensile strength and caliper of the lotioned paper are minimized or avoided. The anhydrous nature of the lotions also aids in the maintenance of such physical properties as tensile and caliper.		

strength, absorbency and caliper of the product; (7) are mild to the skin; (8) possess a soft and lubricious feel; (9) provide skin benefits associated with alpha and beta hydroxy acids; (10) contain an anhydrous lotion which limits lotion diffusion and aids in the maintenance of such physical properties as tensile and caliper; (11) optionally contain a natural oil such as eucalyptol, menthol, thymol, camphor, lemon oil, methyl salicylate, garlic oil and mixtures thereof; and (12) do not require special wrapping or barrier materials for packaging.

SUMMARY OF THE INVENTION

The present invention relates to a tissue paper having a lotion composition wherein the lotion composition comprises:

- (A) at least one antimicrobial;
- (B) at least one hydrophilic solvent;
- (C) at least one skin conditioning agent; and
- (D) at least one hydrophilic surfactant.

The lotion composition, which is preferably substantially water free, is generally applied in an amount ranging from about 2% to about 40% by weight of the dried tissue paper. At 20°C, the lotion composition is preferably a semi-solid or solid. The antimicrobial may be selected from the group consisting of antivirals, antibacterials and mixtures thereof. The antiviral is preferably an organic acid(s) which comprises from about 1% to 60% of the lotion composition. Optionally, an inorganic acid may be added in conjunction with the organic acid to adjust pH. The optional inorganic acid may comprise from about 0.1% to 5% of the lotion composition.

The antibacterial component of the lotion comprises from about 0.1% to 6% of the lotion composition. The hydrophilic solvent which comprises from about 5% to 60% of the lotion composition, preferably has from about 1 to 150 carbon atom(s) wherein the carbon atom(s) are either branched or straight chained, saturated or unsaturated, with or without ether linkages and contains from about 1 to 302 hydroxyl group(s).

The skin conditioning agent of the lotion composition is preferably substantially water free and has a plastic or fluid consistency at 20°C. The skin conditioning agent comprises from about 0.1% to 60% of the lotion composition. The nonionic surfactant which comprises from about 1% to 50% of the lotion

composition preferably has an HLB value of at least about 4. The lotion composition may also optionally include an immobilizing agent which comprises from about 5% to 60 of the lotion composition. The immobilizing agent preferably has a melting point of at least about 25°C. Other optional components which may be added to the lotion composition include natural essential oils, vitamins, panthenol, camphor, thymol menthol, eucalyptol, geraniol, lemon oil, methyl salicylate, clove, alcohol, and mixtures thereof. These other optional components can comprise from about 0.1% to 20% of the lotion composition.

BRIEF DESCRIPTION OF THE DRAWING

Figure 1 is a schematic representation illustrating a preferred process for applying the lotion composition of the present invention to tissue paper webs.

Figure 2 is a schematic representation illustrating an alternative process for applying the lotion composition of the present invention to tissue paper webs.

DETAILED DESCRIPTION OF THE INVENTION

As used herein, the term "comprising" means that the various components, ingredients, or steps, can be conjointly employed in practicing the present invention. Accordingly, the term "comprising" encompasses the more restrictive terms "consisting essentially of" and "consisting of."

All percentages, ratios and proportions used herein are by weight unless otherwise specified.

A. Tissue Papers

The present invention is useful with tissue paper in general, including but not limited to conventionally felt-pressed tissue paper; high bulk pattern densified tissue paper; and high bulk, uncompacted tissue paper. The tissue paper can be of a homogenous or multi-layered construction; and tissue paper products made therefrom can be of a single-ply or multi-ply construction. The tissue paper preferably has a basis weight of between about 10 g/m² and about 65 g/m², and density of about 0.6 g/cc or less. More preferably, the basis

rate is increased. This is due to the fact that, while the semisolid or solid lotion compositions contain primarily solid components, they may also include some minor liquid components.

The solid or semisolid consistency of the lotions at room temperature are due to the addition of high melting components such as those high melting organic acids having antiviral functionality; fatty alcohols; waxes; high molecular weight polyethylene glycols; polyoxyethylene mono-, di-, and tri- sorbitan alkylates; mono-, di-, and tri- sorbitan alkylates; and non-ionic ethoxylated surfactants. The high melting and higher molecular weight alkane fraction of petrolatum, which may be used as a skin conditioning agent in the present invention, can also contribute to raising the melting point of these lotions. These higher molecular weight components of petrolatum are typically high molecular weight waxy-type hydrocarbons.

The lotions of this invention which are solid or semisolid at ambient temperatures, do not have a tendency to flow and migrate into the interior of the tissue web to which they are applied. This means less lotion composition is required for imparting softness and lotion-like feel benefits. It also means there is less chance for debonding of the tissue paper that can potentially lead to decreases in tensile strength.

When applied to tissue paper, the lotion compositions of the present invention impart a soft, lubricious, lotion like feel to the user of the paper. This particular feel has also been characterized as "silky", "slick", "smooth"; etc. Such a lubricious, lotion-like feel is particularly beneficial for those having more sensitive skin due to chronic conditions such as skin dryness or hemorrhoids, or due to more transient conditions such as colds or allergies. Transfer of the lotion to the skin provides the potential for skin benefits for those lotions containing alpha hydroxy and beta hydroxy acids. Additionally, an antimicrobial(s) such as an antiviral, an antibacterial or a combination of both within the lotion aids in the destruction of deleterious microorganisms such as viruses and bacteria. Lotion transfer to the skin can potentially protect those regions from viral and bacterial infections.

Finally, skin conditioning agents such as petrolatum, mineral oil, and dimethicones can form a protective layer on the skin and provide a moisturization or other skin conditioning benefit. In addition, the hydrophobic barrier formed on the skin by such actives as petrolatum, mineral oil,

Antiviral(s)

As used herein, an antiviral refers to something capable of killing viruses such as rhinovirus and influenza. Antivirals which may be added to the lotions of this invention include but are not limited to organic acids which have antiviral functionality. Organic acids useful with this invention include but are not limited to alpha hydroxy acids such as saturated, unsaturated, and aromatic C₁ to C₁₂ carboxylic acids possessing 1 to 4 carboxylic acid groups and having at least one hydroxyl group substituted on the C₂ alpha carbon with additional hydroxyl and other functionalities (i.e.; phenyl, amino, etc.) optionally bound along the carbon chain and aromatic ring(s). A non-inclusive list of alpha hydroxy acids which may be used includes: 2-hydroxyhexanoic acid, 2-hydroxyoctanoic acid, 2-hydroxydecanoic acid, 2-hydroxydodecanoic acid, 2-hydroxycaprylic acid, citric acid, tartaric acid, mandelic acid, ascorbic acid, ascorbyl palmitate, malic acid, glycolic acid, lactic acid, gluconic acid, hydroxycaprylic acid, 2-hydroxypropionic acid, 2-hydroxybutanoic acid, 2-hydroxypentanoic acid, and mixtures thereof.

Other examples of organic acids useful with this invention include beta hydroxy acids such as saturated, unsaturated, and aromatic C₁ to C₁₂ carboxylic acids possessing 1 to 4 carboxylic acid groups and having at least one hydroxyl group substituted on the C₃ beta carbon with additional hydroxyl and other functionalities (i.e.; phenyl, amino, hydroxyl, etc.) optionally bound along the carbon chain or aromatic ring(s). A non-inclusive list of beta hydroxy acids useful with this invention includes: 3-hydroxyhexanoic acid, 3-hydroxyoctanoic acid, 3-hydroxydecanoic acid, 3-hydroxydodecanoic acid, 3-hydroxycaprylic acid, salicylic acid, 3-hydroxybutanoic acid, 3-hydroxypentanoic acid, 3-hydroxypropionic acid, and mixtures thereof.

A non-inclusive list of other organic acids useful with this invention includes saturated, unsaturated, and aromatic C₁ to C₁₂ carboxylic acids possessing 1 to 4 carboxylic acid groups with optional functional groups (i.e.; phenyl, amino, hydroxyl, etc.) substituted along the carbon chain or on the aromatic ring(s) such as propionic acid, hexanoic acid, octanoic acid, decanoic acid; C₁ to C₁₂ carboxylic acids possessing 1 to 4 carboxylic acid groups wherein a hydroxyl group(s) is substituted on carbon number(s) C₄ or above such as 4-hydroxyhexanoic acid, 5,6-dihydroxyhexanoic acid, 6-hydroxyhexanoic acid, 4-

Many theories exist as to how organic acids deactivate viruses such as rhinovirus and influenza. One possible mechanism for virus deactivation is the donation of protons from the acid to the amide nitrogen of one or all of the various proteins within the virus structure. This protonation leads to a net positive charge within the protein structure. This leads to repulsion between the protonated amide moieties of the high molecular weight protein molecules. This leads to denaturing of some or all of the protein structures within the virus. This denaturing or unfolding of the protein structure deactivates the virus.

Another potential mechanism for deactivation by the organic acids is through hydrolysis of the proteins and other molecules within the virus structure. This acid catalyzed hydrolysis most likely occurs through cleavage of the amide functionalities of the proteins making up the complex virus structure. This hydrolysis and breakage of the bonds of the proteins of the virus structure deactivates the virus and renders it ineffective in attacking healthy cells within the body. For enveloped viruses like influenza where the structure is surrounded by a lipid shell, the acid may also cause deactivation through hydrolysis of this lipid layer. In addition, some surfactants such as those of the ethoxylated alcohol type, can dissolve this lipid shell and render the virus inactive. The antiviral component(s) of the lotion comprises from about 1% to 60% of the lotion composition. Mixtures of the antivirals may also be used.

Antibacterial(s)

Antibacterials within the lotion can also aid in the lotion's ability to kill deleterious microorganisms such as *Escherichia coli* and *Staphylococcus Saprophyticus*. Antibacterials useful with this invention include but are not limited to:

Pyrithiones, especially sodium omdine and the zinc complex (ZPT)

OCTOPIROX®

Dimethyldimethylol Hydantoin (GLYDANT®)

Methylchloroisothiazolinone/methylisothiazolinone (KATHON CG®)

Sodium Sulfite

Sodium Bisulfite

Imidazolidinyl Urea (GERMALL 115®)

Diazolidinyl Urea (GERMALL II®)

Benzyl Alcohol

2-Bromo-2-nitropropane-1,3-diol (BRONOPOL®)

3,3',4-Trichlorocarbanilide

Quaternary Ammonium Compounds

Benzalkonium Chloride

Benzethonium chloride

Biguanides

Polyhexamethylene Biguanide Hydrochloride

Chlorhexidine

Chlorhexidine derivatives

Chlorhexidine Digluconate

Chlorhexidine Dihydrochloride

Chlorhexidine Diacetate

Chloroxylonol

Oxyquinolines

8-Hydroxyquinoline

Iodine

Iodophers

Povidone Iodine

Hexamidine

Alcohols

Ethanol

Butyl Alcohol

Isopropanol

2-Phenoxyethanol

Antibiotics

Bacitracin

Neomycin

Polymyxin B

Nystatin

Organic Acid and Acid Donors

Citric Acid

Ascorbic Acid

Malic Acid

Tartaric Acid

OCTOPIROX®, PCMX, ZPT, natural essential oils and their key ingredients, and mixtures thereof. The most preferred antibacterial active for use in the present invention is TRICLOSAN®.

The antibacterial component comprises from about 0.1% to 6% of the lotion composition, preferably from about 0.3% to 3% and more preferably from about 0.5% to 1.5%. Though the antibacterials may be mixed with one another and/or mixed with the antivirals of this invention, some mixtures within the scope of this invention may result in the formation of a precipitate.

Some of the components of the lotion of this invention have multiple functionality. For example, citric acid and ascorbic acid have both antiviral and antibacterial functionality. Additionally, the antibacterials and some of the antivirals also act as preservatives by preventing the growth of deleterious microorganisms in the lotion composition itself.

2. Hydrophilic Solvent(s)

Another important component(s) of these lotions is the incorporation of hydrophilic solvents to aid in the solubilization of the antiviral organic acids. Suitable solvents include but are not limited to solvents having from about 1 to 150 carbon atoms wherein the carbon may be branched or straight chain, saturated or unsaturated, with or without ether linkages and containing from about 1 to 302 hydroxyl group(s). These solvents include but are not limited to glycol type solvents such as polyethylene glycols, glycerin, ethylene glycol, propylene glycol, polypropylene glycol, ethanol, isopropanol, hexylene glycol, and mixtures thereof. Preferred is polyethylene glycol having a molecular weight range of from about 200 to 3000. More preferred solvents include those solvents having from about 1 to 25 carbon atoms and from about 1 to 8 hydroxyl group(s). Even more preferred is propylene glycol and polyethylene glycols wherein the polyethylene glycols have a molecular weight range from about 200 to 1500 or mixtures thereof.

In addition to allowing solubilization of the antiviral organic acids, some of the glycol type solvents are also known to be antiviral in nature such as propylene glycol and triethylene glycol. Also, some of these glycol type solvents can provide an increase in the viscosity of the lotion and thus prevent unwanted migration of the lotion components within the fibrous paper network. These glycol based solvents can also function as humectants and thus provide a

moisturization benefit to the skin. But, their primary use in this particular application is to aid in the solubilization of the antiviral organic acid. The hydrophilic solvent comprises from about 5% to 60% of the lotion composition.

3. Skin Conditioning Agent(s)

The other active ingredient(s) in these lotion compositions are one or more skin conditioning agents. As used herein, a skin conditioning agent is a material that softens, soothes, supple, coats, lubricates, moisturizes, or cleanses the skin. A skin conditioning agent typically accomplishes several of these objectives such as soothing, moisturizing, and lubricating the skin. For the purposes of the present invention, these skin conditioning agents have either a plastic or fluid consistency at 20°C, i.e., at ambient temperatures. This particular skin conditioning agent consistency allows the lotion composition to impart a soft, lubricious, lotion-like feel.

The skin conditioning agents useful in the present invention are also substantially free of water. By "substantially free of water" it is meant that water is not intentionally added to the skin conditioning agent. Addition of water to the skin conditioning agent or the lotion is not necessary in preparing or using the lotion compositions of the present invention and could require an additional drying step. In fact, it is undesirable and unnecessary to add water to these antiviral lotions. The addition of water could lead to potential microbial growth in the lotions. In addition, water would lower the melting point of the lotion and aid in the migration of other lotion components within the paper fiber substrate. This would likely have a negative impact on the tensile and caliper properties of the lotioned paper. However, minor or trace quantities of water in the skin conditioning agent that are picked up as a result of, for example, ambient humidity can be tolerated without adverse effect. Typically, the skin conditioning agents used in the present invention contain about 5% or less water, preferably about 1.0% or less water, more preferably about 0.5% or less water, and most preferably about 0.1% or less water.

Skin conditioning agents useful in the present invention can be petroleum-based such as mineral oil and petrolatum, fatty acid ester type, fatty alcohol type, dimethicones including functionalized derivatives of dimethicones, polyethylene glycols, or mixtures of these skin conditioning agents. Suitable petroleum-based skin conditioning agents include those hydrocarbons, or

4. Hydrophilic Surfactant(s)

In many instances, lotion compositions according to the present invention will be applied to tissue paper webs that will be used as toilet tissue. In such cases, it is highly desirable that the paper web treated with the lotion composition be sufficiently wettable. Depending upon the particular immobilizing agent used in the lotion composition of the present invention, an additional surfactant, preferably a hydrophilic surfactant (or a mixture of hydrophilic surfactants) may, or may not, be required to improve wettability. For example, some immobilizing agents, such as N-cocoyl-N-methoxypropyl glucamide have HLB values of at least about 7 and are sufficiently wettable without the addition of a hydrophilic surfactant. Other immobilizing agents such as the C₁₆ - C₁₈ fatty alcohols and waxes having HLB values below about 7 will require addition of a hydrophilic surfactant to improve wettability if the lotion composition is applied to paper webs used as toilet tissue. Similarly, a hydrophobic skin conditioning agent such as petrolatum or mineral oil will require the addition of a hydrophilic surfactant. It should be noted that water absorbency will be more critical in a product such as toilet tissue. A lotion applied to a facial tissue may not require a surfactant for purposes of absorbency. However, a surfactant may be required in order to emulsify and stabilize the hydrophilic and hydrophobic components contained in the lotion.

Suitable hydrophilic surfactants will be miscible with the skin conditioning agent, the optional immobilizing agent and other ingredients in the composition so as to form homogeneous mixtures. Because of possible skin sensitivity of those using paper products to which the lotion composition is applied, these surfactants should also be relatively mild and non-irritating to the skin. Typically, these hydrophilic surfactants are nonionic as this type of surfactant tends to be less irritating to the skin than anionic and cationic surfactants. Additionally, the nonionic surfactants are also easier to formulate into the lotion compositions of the present invention. The higher melting nonionic surfactants are preferred.

Since maintaining skin mildness is an important factor in the production of lotioned tissue products, the use of non-ionic surfactants is preferred since they are milder to the skin than charged surfactants. This is not to state that all charged surfactants are irritating to the skin. But, as a general rule, most charged surfactants are irritating to the skin. The non-ionic surfactants used in these antimicrobial lotions serve several important functions. One critical

function is to allow the hydrophilic acid/solvent mixture to mix with the hydrophobic skin conditioning agents. This allows for a stable blend of the hydrophobic components to be made with the hydrophilic components.

In addition to providing lotion stability, the surfactant also allows the lotioned paper to absorb water and mucus at a reasonable rate. If no surfactant was formulated into the lotion, the lotioned paper product in some cases might repel water and mucus thereby possibly causing negative consumer reactions. Lotion formulations consisting of no surfactant and such hydrophobic skin conditioning agents as petrolatum, mineral oil, and dimethicone would be especially hydrophobic. As noted, the inclusion of the surfactant also aids in solubilizing organic acids into these hydrophobic skin conditioning agents.

It is important for the lotioned tissue paper (especially in the case of toilet tissue) according to the present invention to be absorbent and/or wettable, as reflected by its hydrophilicity. Hydrophilicity of tissue paper refers, in general, to the propensity of the tissue paper to be wetted with water. Hydrophilicity of tissue paper can be quantified somewhat by determining the period of time required for dry tissue paper to become completely wetted with water. This period of time is referred to as the "wetting" (or "sinking") time. In order to provide a consistent and repeatable test for wetting time, the following procedure can be used for wetting time determinations: first, a paper sample (the environmental conditions for testing of paper samples are $23 \pm 1^\circ\text{C}$ and $50 \pm 2\%$ RH. as specified in TAPPI Method T 402), approximately 2.5 inch x 3.0 inches (about 6.4 cm x 7.6 cm) is cut from an 8 sheet thick stack of conditioned paper sheets; second, the cut 8 sheet thick paper sample is placed on the surface of 2500 ml. of distilled water at $23 \pm 1^\circ\text{C}$ and a timer is simultaneously started as the bottom sheet of the sample touches the water; third, the timer is stopped and read when wetting of the paper sample is completed, i.e. when the top sheet of the sample becomes completely wetted. Complete wetting is observed visually.

The preferred hydrophilicity of tissue paper depends upon its intended end use. It is desirable for tissue paper used in a variety of applications, e.g., toilet paper, to completely wet in a relatively short period of time to prevent clogging once the toilet is flushed. Typically, wetting time is 4 minutes or less, preferably, wetting time is 90 seconds or less, more preferably 30 seconds or less, and most preferably, wetting time is 10 seconds or less.

and stearyl alcohol ethoxylated to an average degree of ethoxylation of from about 10 to about 20 may also be used as the hydrophilic surfactant.

Another type of suitable surfactant for use in the present invention includes AEROSOL OT, a dioctyl ester of sodium sulfosuccinic acid marketed by Cytec Industries Inc. of West Paterson, New Jersey.

Still other types of suitable surfactants for use in the present invention, made by General Electric of Fairfield, Connecticut, include silicone copolymers such as General Electric's SF 1188 (a copolymer of a polydimethylsiloxane and a polyoxyalkylene ether) and General Electric's SF 1228 (a silicone polyether copolymer). These silicone surfactants can be used in combination with the other types of hydrophilic surfactants discussed above, such as the ethoxylated alcohols. These silicone surfactants have been found to be effective at concentrations as low as 0.1%, more preferably from about 0.25 to about 1.0%, by weight of the lotion composition. These silicone surfactants as well as other dimethicone copolyols can also be effective in emulsifying non-functionalized dimethicone fluids such as General Electric's SF96-20, SF96-50, SF96-100, and SF96-350.

The amount of hydrophilic surfactant required to increase the wettability of the lotion composition to a desired level will depend upon the HLB value of the surfactant, the concentration of immobilizing agent used, the HLB value of the other ingredients in the formulation and like factors. The lotion composition can comprise from about 0.1% to about 60% of the hydrophilic surfactant when needed to increase the wettability properties of the composition. Preferably, the lotion composition comprises from about 5% to about 50%, and most preferably from about 10% to 30% of the hydrophilic surfactant.

5. Optional Immobilizing Agent(s)

An optional component of the lotion compositions of the present invention is an agent(s) capable of immobilizing the skin conditioning agent on the surface of the paper to which the lotion composition is applied. Because some of the skin conditioning agents, surfactants, solvents and optional ingredients in the composition have a plastic or fluid consistency at 20°C, they tend to flow or migrate, even when subjected to modest shear. When applied to a tissue paper web, especially in a melted or molten state, the skin conditioning agent will not

methyl glucamide and petrolatum that will normally not melt into a single phase mixture, will melt into a single phase mixture upon the addition of 20% of a 1:1 mixture of steareth-2 and sorbitan tristearate as the emulsifier.

The amount of immobilizing agent that should be included in the lotion composition will depend on a variety of factors, including the particular skin conditioning agent involved, the particular immobilizing agent involved, whether an emulsifier is required to solubilize the immobilizing agent in the skin conditioning agent, the other components in the lotion composition and like factors. The lotion composition comprises from about 5% to 60% of the immobilizing agent and preferably from about 10% to 40% of the immobilizing agent.

6. Other Optional Components

Lotion compositions can comprise other optional components typically present in emollients, creams, and lotions of this type. These optional components include viscosity modifiers, perfumes, disinfectants, pharmaceutical actives, film formers, vitamins (e.g. vitamin E), deodorants, opacifiers, astringents, solvents and the like. In addition, stabilizers can be added to enhance the shelf life of the lotion composition such as cellulose derivatives, proteins, anti-oxidants and lecithin. All of these materials are well known in the art as additives for such formulations and can be employed in appropriate amounts in the lotion compositions of the present invention. In addition, natural essential oils such as camphor, thymol, pine oil, menthol, eucalyptol (cineole), geraniol, lemon oil, methyl salicylate, clove and other similar materials may be used to give the product a medicinal scent. In addition, some of these natural essential oils also possess antiviral and antibacterial properties. These other optional components may comprise from about 0.1% to 20% of the lotion composition.

C. Treating Tissue Paper With Lotion Composition

In preparing lotioned paper products according to the present invention, the lotion composition may be applied to at least one surface of a tissue paper web. Any of a variety of application methods that evenly distribute lubricious materials having a molten or liquid consistency can be used. Suitable methods

mixture is mixed and heated in the range of 60 to 90 °C until a clear, phase stable, transparent, and colorless solution results. The weight percentages of these components are shown in Table I below:

Table I

Lotion Composition A

<u>Component</u>	<u>Weight %</u>
Polyoxyethylene(4) lauryl ether	12.0%
polyoxyethylene(10) cetyl ether	12.2%
Propylene Glycol	26.0%
Salicylic Acid	39.6%
Cetearyl Alcohol	5.2%
Mineral Oil	5.0%

Example 2

B. Preparation of Lotion Composition B

The water free Lotion Composition B is made by first mixing the following components together: propylene glycol, polyoxyethylene(4) lauryl ether (Brij 30 or equivalent), and polyoxyethylene(10) cetyl ether (Brij 56 or equivalent). This mixture is heated to 60 to 90 °C and mixed until a clear, transparent, and colorless solution results. While mixing and maintaining this solution temperature in the range of 60 to 90 °C, citric acid is added. This mixture is mixed and heated in the range of 60 to 90 °C until a clear, transparent, and colorless solution results. While mixing and maintaining this solution temperature in the range of 60 to 90 °C, the cetearyl alcohol is added. This mixture is mixed and heated in the range of 60 to 90 °C until a clear, transparent, and colorless solution results. While mixing and maintaining this solution temperature in the range of 60 to 90 °C, the mineral oil is added. This

mixture is mixed and heated in the range of 60 to 90 °C until a clear, phase stable, transparent, and colorless solution results. The weight percentages of these components are shown in Table II below:

Table II

Lotion Composition B

<u>Component</u>	<u>Weight %</u>
Polyoxyethylene(4) lauryl ether	17.0%
Polyoxyethylene(10) cetyl ether	5.6%
Propylene Glycol	24.9%
Citric Acid	41.4%
Cetearyl Alcohol	5.6%
Mineral Oil	5.5%

Example 3

C. Preparation of Lotion Composition C

The water free Lotion Composition C is made by first mixing the following components together: propylene glycol, polyoxyethylene(20) sorbitan monolaurate (Tween 20 or equivalent), and polyoxyethylene(4) sorbitan monostearate (Tween 61 or equivalent). This mixture is heated to 60 to 90 °C and mixed until a clear, transparent, and slightly yellow solution results. While mixing and maintaining this solution temperature in the range of 60 to 90 °C, citric acid is added. This mixture is mixed and heated in the range of 60 to 90 °C until a clear, phase stable, transparent, and slightly yellow solution results. The weight percentages of these components are shown in Table III below:

Table III

Lotion Composition C

WHAT IS CLAIMED IS:

1. A tissue paper having a lotion composition wherein said lotion composition comprises:
 - (A) at least one antimicrobial;
 - (B) at least one hydrophilic solvent;
 - (C) at least one skin conditioning agent; and
 - (D) at least one hydrophilic surfactant.
2. The tissue paper of Claim 1 wherein said lotion composition is applied to at least one surface of said tissue paper in an amount ranging from about 2% to about 40% by weight of the dried tissue paper, preferably wherein said lotion composition is semi-solid or solid at 20°C, and more preferably wherein said lotion composition is substantially water free.
3. The tissue paper of Claim 1 wherein said antimicrobial is selected from the group consisting of benzalkonium chloride, benzethonium chloride, chlorhexidine, polyhexamethylene biguanide hydrochloride, methylparaben, propylparaben, TRICLOCARBAN®, and OCTOPIROX®.
4. The tissue paper of Claim 1 wherein said antimicrobial is selected from the group consisting of bacitracin, neomycin, polymyxin B, nystatin and mixtures thereof.
5. The tissue paper of Claim 1 wherein said antimicrobial is selected from the group consisting of antivirals, antibacterials, and mixtures thereof, preferably wherein said antibacterial comprises from about 0.1% to about 6% of said lotion composition and is selected from the group consisting of TRICLOSAN®, povidone iodine; chloroxylonol; PCMX; ZPT; KATHON CG®; CLOFLUCARBAN; sodium omadine; natural essential oils; 8-hydroxyquinoline; D-sphingosine; hexamidine; imidazolidinyl urea; hinokitiol; eugenol; citric acid; ascorbic acid; malic acid; tartaric acid; benzoic acid; triacetin; onamer M; ethanol; butyl alcohol; isopropanol; 2-phenoxyethanol; coco amidopropyl phosphatidyl PG-dimonium chloride; linole amidopropyl phosphatidyl PG-dimonium chloride; coco phosphatidyl PG-dimonium chloride; and mixtures thereof, and wherein said antiviral is an organic acid which comprises from about 1% to about 60% of said lotion composition, more preferably wherein said antibacterial is TRICLOSAN® and said organic acid is selected from the group

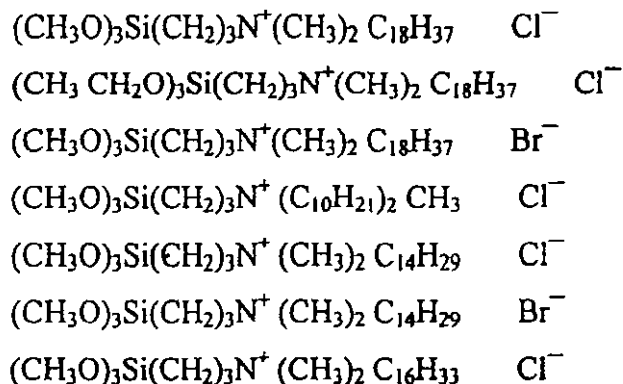


INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : A01N 25/08, 55/00, A61K 7/021, 31/695	A1	(11) International Publication Number: WO 00/54587 (43) International Publication Date: 21 September 2000 (21.09.00)
(21) International Application Number: PCT/US00/06871 (22) International Filing Date: 15 March 2000 (15.03.00) (30) Priority Data: 60/124,504 16 March 1999 (16.03.99) US (71) Applicant (for all designated States except US): COATING SYSTEMS LABORATORIES, INC. [US/US]; P.O. Box 50386, Phoenix, AZ 85076-0386 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): PETERSON, William, R. [US/US]; 3126 E. Amber Ridge Way, Phoenix, AZ 85048 (US). GIACCIO, David [US/US]; 1611 S. Ki Street, Phoenix, AZ 85044 (US). BERMAN, Renee, E. [US/US]; 1600 N. Saba #110, Chandler, AZ 85225 (US). (74) Agents: HEINES, M., Henry et al.; Townsend and Townsend and Crew LLP, Two Embarcadero Center, 8th Floor, San Francisco, CA 94111 (US).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: ANTIMICROBIAL SKIN PREPARATIONS CONTAINING ORGANOSILANE QUATERNARIES (57) Abstract A method for application to the skin of aqueous compositions containing antimicrobial organosilane quaternary ammonium compounds, which remain on the skin, are substantive to it and reduce or eliminate bacteria, viruses and fungi present and prevent future contamination by their presence and substantive character. All formulations are aqueous solutions which may be scented and/or colored and all contain a water soluble, organosilicon quaternary ammonium compound or mixture thereof; specifically 3-(trimethoxysilyl)-propyloctadecyl-dimethyl ammonium chloride or 3-(trimethoxysilyl)propyldodecylmethyl ammonium chloride and the trisilanol, polysiloxanol and water soluble polysiloxane derivatives thereof.		

The term "antimicrobial" as used herein is used in reference to the ability of the compound composition or article to eliminate, remove, inactivate, kill or reduce microorganisms such as bacteria, viruses, fungi, molds, yeasts and spores. The term antimicrobial as used herein to imply reduction and elimination of the growth and formation of microorganisms such as described above.

Specific quaternary ammonium organosilanes within the scope of the invention are represented by the formulae:



A requirement of the quaternary ammonium organosilanes used in this present invention is that they be soluble in water at ambient temperature (20-25°C) to be useful. It has been observed that if the organosilanes are not sufficiently soluble in water to form a clear solution at ambient temperature in the quantities in which they are to be incorporated into the aqueous solutions, then the production of clear and stable solutions is precluded.

Another requirement for the practice of this invention is that the aqueous formulations and compositions described herein are prepared using purified water. Distilled or deionized water which when measured conductively has a resistance of at least 10 megohm per square centimeter with a purity level of 18 megohm per square centimeter is preferred. The presence of dissolved impurities such as metal ions, metal salt and anionic species, particularly fluoride ions will greatly decrease the stability and shelf life of the aqueous formulations.

The compositions suitable to practice the present invention contain from 0.01% to 5% by weight of the quaternary ammonium organosilanes described above whether admixed with water singly or jointly as in a mixture of the quaternary ammonium organosilanes. The preferred concentrations of the present invention are 0.1 to 4.0 weight percent. Lower concentrations do not maximize the antimicrobial benefits obtained on application and higher concentrations do not impart additional antimicrobial or moisturizing advantage. While any formulation may be used to cause the quaternary

ammonium organosilanes to beneficially adhere to the skin, the most preferred are aqueous solutions containing 0.2 to 0.5 weight percent. Various water soluble additives and stabilizers as defined in prior art may be incorporated into solutions as practiced in this instant invention which does not change or alter the scope and novelty of this invention.

The preferred quaternary ammonium organosilanes of the present invention are the commercially available 3-(trimethoxysilyl)propyldimethyloctadecyl ammonium chloride and 3-(trimethoxysilyl)propyldidecylmethyl ammonium chloride. These materials contain hydrolyzable methoxy groups bound to the silicon atom. It is well known from prior art and to those skilled in the art that on addition of these compounds to water, the methoxy groups hydrolyze to form hydroxy substituted silicon atoms termed in the art as silanols with simultaneous liberation of methanol as a by-product of the hydrolysis. The resultant compound formed on addition of quaternary ammonium organosilanes of the above compositions are the respective trisilanol species for

3-(trimethoxysilyl)propyldimethyloctadecyl ammonium chloride
 $(\text{HO})_3\text{Si}(\text{CH}_2)_3\text{N}^+(\text{CH}_3)_2\text{C}_{18}\text{H}_{37} \quad \text{Cl}^-$
 and 3-(trimethoxysilyl)didecylmethyl ammonium chloride

$(\text{HO})_3\text{Si}(\text{CH}_2)_3\text{N}^+(\text{CH}_3)(\text{C}_{10}\text{H}_{21})_2 \quad \text{Cl}^-$

As the silanol species prepared on hydrolysis are reactive, they may undergo auto condensation reactions in aqueous solution to form water-soluble silanol containing disiloxane species represented by the following example structure obtained from 3-(trimethoxysilyl)propyldimethyloctadecyl ammonium chloride:

$\text{C}_{18}\text{H}_{37}\text{N}^+\text{Me}_2(\text{CH}_2)_3\text{Si}(\text{OH})_2\text{OSi}(\text{OH})_2(\text{CH}_2)_3\text{N}^+\text{Me}_2\text{C}_{18}\text{H}_{37} \quad 2\text{Cl}^-$

where $\text{Me} = \text{CH}_3$

These compounds may undergo further auto condensation reactions with additional trisilanol species present to produce water soluble polysiloxanol compounds which can be represented as follows for derivatives of the 3-(trimethoxysilyl)-dimethyloctadecyl ammonium chloride hydrolysis products:

$[\text{C}_{18}\text{H}_{37}\text{N}^+\text{Me}_2(\text{CH}_2)_3\text{Si}(\text{OH})_2]_2\text{Si}(\text{OH})(\text{CH}_2)_3\text{N}^+\text{Me}_2\text{C}_{18}\text{H}_{37} \quad 3\text{Cl}^-$

where $\text{Me} = \text{CH}_3$

Additional water-soluble homologues may be present in the formulations and compositions of this invention. The trisilanol, disiloxanylsilanol and polysiloxanol derivatives are all equally reactive with the skin and bond to the skin on application with liberation of water to form a macromolecular network on the skin, nail and hair surface

staphylococcus aureus to increase steadily and significantly over the test period. (See Figure 5).

EXAMPLE 8

A solution prepared as in Example 1 was utilized to prepare towelettes suitable for use as antimicrobial hand wipes. Polypropylene towelettes, approximately 5"x7", were moistened with 2 mL of solution, folded, placed in waterproof packets and sealed. After three months, the pouch was opened. Clean porcelain plates were wiped on one half of one side with the towelettes and allowed to dry. Measurement of the contact angle of water droplets on the surface of the porcelain plates indicated an average contact angle of 65° for the treated side and 43° for the untreated side. The higher contact angles indicate the presence of the quaternary ammonium organosilane on the plate surface. Washing the plate with deionized water following application of the quaternary ammonium organosilane did not change the contact angles as measured previously for the treated and the untreated plate surfaces. Similar experiments utilizing cotton or cellulose towelettes showed a marginal increase in contact angle after treatment of the plate surface with the towelette. This difference was due to the quaternary ammonium organosilane present in the aqueous solution being reduced through reaction with the cotton and cellulose towelettes and, therefore, was not available in solution to be transferred to the substrate.

EXAMPLE 9

A liquid antimicrobial hand soap formulation was prepared by adding 120 grams ODTA over a period of 10 minutes to a stirred solution of 15 liters deionized water (18 megohm purity) containing 30 ppm FD&C Yellow #6 while maintaining the reaction temperature at 25°C. To this solution was added over 30 minutes 5 kg of Burcoterger LHS (Burlington Chemical, Burlington, NC), a prepared formulation of liquid soap concentrate, Burcoterger LHS. The orange mixture was stirred for an additional 2 hours. The clear liquid solution was stable when stored at ambient temperatures for greater than one year and is suitable for use in liquid spray-soap applications.

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SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIVISIÓN DE NUEVAS CREACIONES

202080
Bogotá, D.C., Agosto/03/2007

Abogado
MAURICIO JARAMILLO CAMPUZANO
Apoderado
Solicitante: PRODUCTOS FAMILIA S.A

ASUNTO	Radicación	05020729
	Trámite	002
	Evento	001
	Actuación	430
	Oficio	9861
	Folios	24

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

1. Documentos estudiados

- 1.1. Descripción: Folios: 5 a 13 como se radicó inicialmente
- 1.2. Reivindicaciones: 1 a 18 Folios 14 a 18 como se radicó inicialmente

2. Objeto de la invención

- Título de la solicitud: UNA COMPOSICION DE LOCION SUAVIZANTE, LUBRICANTE Y ANTIBACTERIAL Y EL PAPEL TISU QUE LA CONTIENE (FOLIOS 1 Y 3).

Reivindicaciones 1-7: Composición de loción suavizante, lubricante y antibacterial para ser aplicada en por lo menos una superficie de papel tisú, que contiene:

- a) Entre 10 y 30 % de agentes antibacteriales como: el 3-(trimetoxisilil propildimetiloctadecil cloruro de amonio, N-alquil dimetil bencil cloruro de amonio (C12-C18) o mezclas de los mismos.
- b) Solventes hidrofílicos entre 10 y 50%, tales como propilenglicol, polietilenglicol de peso molecular entre 300 y 900 o sus mezclas.
- c) Entre 2 y 50% de emolientes y suavizantes como el amonio cuaternario, siliconas o mezclas de los mismos.
- d) Entre 0,5 y 20% de aceites naturales, extractos naturales, vitaminas o mezclas de ellos.
- e) Entre 0,5 y 10% de surfactante no iónico seleccionado del tipo alquilfenol-hidroxipolioxietileno o octilfenoxipolietoxietanol.
- f) Agua desmineralizada entre el 20 y 40 %.

Reivindicaciones 8-18: Papel tisú que incluye la composición reivindicada de 1-7.

El problema planteado en esta solicitud es la necesidad de composiciones antibacteriales, no oleosas, aplicadas en papel tisú que no irriten la piel.

Para solucionar este problema técnico la solicitud en estudio proporciona una loción antibacterial, no oleosa, que imparta suavidad, lubricidad y sedosidad aplicada en la superficie de la hoja de papel tisú.

La presente solicitud se catalogó conforme a la clasificación internacional de patentes (IPC), así A61K 7/40.

3. De la solicitud de Patente

3.1 Descripción (artículo 28 D 486)

El interesado no allega resultados comparativos con el estado de la técnica que demuestren que la loción reivindicada elimina el 99% de las bacterias (folio 12) asociadas a la gripa.

En el folio 13, se menciona "composición suavizante y antiviral", lo cual no es concordante con el título ni las reivindicaciones de la presente solicitud.

Por lo tanto se debe tomar en cuenta estas observaciones y allegar las correcciones correspondientes.

3.2 Reivindicaciones (artículo 30 D 486)

La reivindicación 1: muestra posibilidades de combinaciones de los ingredientes que la componen, lo cual conduce a la obtención de muchas composiciones antibacteriales, para el mismo propósito.

Las reivindicaciones 8-17 no son claras ni concisas porque caracterizan al papel por la composición reivindicada en 1-7, con la cual esta recubierto y la forma de aplicar dicha composición a su superficie y no por los elementos que lo constituyen.

La reivindicación 18: No es clara ni concisa porque caracteriza al papel por el uso y no por los elementos que lo constituyen.

Se requiere al solicitante para que tome en cuenta estas observaciones y allegue las correcciones pertinentes.

4. Determinación del Estado de la Técnica

Considerando que la fecha de presentación de la primera solicitud de patente es: Marzo 07/2005, se buscaron documentos del estado de la técnica relacionados, con fecha de publicación anterior a esta.

N°	Documento	Título	Fecha de publicación*
D1	US 9945771	Tissue paper having antimicrobial skin lotion	1999/09/16
D2	WO 0054587	Antimicrobial skin preparations containing organosilane quaternaries	2000/09/21

5. Análisis de patentabilidad (artículo 14 D486)

5.1. Novedad (artículo 16 D486)

Las características esenciales de las composiciones de las reivindicaciones 1-7, correspondientes a: agentes antibacteriales 10-30%, solventes hidrofílicos 10-50% (propilenglicol), emolientes y suavizantes 2-50% (dimeticona), aceites naturales y vitaminas 0,5-20% (vitamina E), surfactante no iónico (0,5-10%); habían sido divulgadas previamente en D1 (folios 42 y 43 pag 6 y 7) de la siguiente manera: agentes antibacteriales (1-60%), solventes hidrofílicos ((5-60%) (propilenglicol), emolientes y suavizantes como siliconas (0.1-60%) (dimeticona), aceites naturales y vitaminas ((0,1-20%) (vitamina E), surfactante no iónico (1-50%). Comparando se evidencia que las composiciones de las reivindicaciones de la 1-7 contienen las mismas sustancias que las del estado de la técnica, por lo tanto no pueden considerarse nuevas.

5.2. Nivel inventivo (artículo 18 D486)

La solicitud reivindica composiciones que no son nuevas y otras que si podrían ser consideradas nuevas. Por lo que se procede a evaluar el nivel inventivo de las que se consideran nuevas: es decir las que contienen: el agente antibacterial 3-(trimetoxisilil propildimetiloctadecil cloruro de amonio y el surfactante no iónico octilfenoxipoliethoxietanol y agua.

El estado de la técnica más cercano es D1, porque divulga una composición que Contiene: agentes antibacteriales, solventes hidrofílicos (propilenglicol), emolientes y suavizantes (dimeticona), aceites naturales y vitaminas (vitamina E), surfactante no iónico, que sirve para el mismo propósito: composiciones antibacteriales contenidas en papel tisú, que la invención reivindicada.

La única diferencia con D1 es que la composición de esta solicitud contiene: el agente antibacterial 3-(trimetoxisilil propildimetiloctadecil cloruro de amonio y el surfactante no iónico octilfenoxipoliethoxietanol y agua.

El hecho de modificar las composiciones del estado de la técnica, incluyendo el agente antibacterial: 3-(trimetoxisilil propildimetiloctadecil cloruro de amonio y el surfactante no iónico octilfenoxipoliethoxietanol y agua, no parece conceder un efecto técnico inesperado porque las composiciones reivindicadas son similares, ya que contienen los mismos ingredientes (agentes antibacteriales, solventes hidrofílicos: propilenglicol, emolientes y suavizantes (dimeticona), aceites naturales y vitaminas (vitamina E), surfactante no iónico y agua); que las del estado de la técnica y no presentan un efecto técnico tal que pueda ser considerado como una ventaja comparativa frente a las composiciones del estado de la técnica. El uso de surfactantes no iónicos y sus ventajas se enseña en D1 (folio 50), así que la inclusión del octilfenoxipoliethoxietanol en la actualidad no evidencia que se logre algún efecto técnico particular empleando esta característica técnica, por lo que se considera son composiciones alternativas a las previamente conocidas.

Analizando todo lo mencionado anteriormente no puede definirse el efecto técnico logrado, el problema técnico objetivo fundamental de la invención, no puede ser determinado y las composiciones reivindicadas se consideran tan solo una alternativa a las previamente conocidas.

El solicitante no muestra a lo largo de la descripción, resultados que evidencien que las composiciones reivindicadas tienen una ventaja comparativa con respecto a las enseñadas en D1 y D2.

Teniendo en cuenta el estado de la técnica en su totalidad, para el experto en la materia era obvio incluir dentro de la composición de D1, el agente antibacterial 3-(trimetoxisilil propildimetiloctadecil cloruro de amonio, mencionado en D2 (folio 57 y 59 pag 14, reglón 7). En razón a que los dos documentos pertenecen al mismo campo técnico y tienen el mismo propósito, para el experto en la materia era obvio combinarlos y así obtener la composición reivindicada en la presente solicitud.

Por lo cual puede no existir nivel inventivo.

6. Conclusión:

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

Nº	Documento Nº	Reivindicaciones afectadas	Requisito que afecta
D1	US 9945771	1-18	Novedad y nivel inventivo
D2	WO 0054587	1-18	Nivel inventivo

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

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


ALIX CARMENZA CÉSPEDES DE VERGEL
Jefe de División de Nuevas Creaciones

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

16 AGO. 2007

CONCEPTO TÉCNICO No.1250	EXAMINADOR TÉCNICO Código No.202078
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100293

EXAMEN TÉCNICO DE FONDO			
Nº Radicación	05020729	Fecha de presentación	Marzo 07/2005
Nº Solicitud Internacional		Fecha Solicitud Internacional	
Nº Prioridad		Fecha de Prioridad	

Palabras clave	tissue lotion antimicrobial skin
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CLASIFICACIONES INTERNACIONALES DE BÚSQUEDA
A61K 7/40.

DOCUMENTOS CORRESPONDIENTES EN OTROS PAÍSES
Patente Original

BASES DE DATOS CONSULTADAS
ESPACENET

INFORMES DE EXÁMENES EN OTRAS OFICINAS		
Oficina	Fecha	Reiv. afectadas

ANTERIORIDADES ENCONTRADAS		
Documento	Relevancia	Reiv. afectadas
WO9945771	NOVEDAD Y NIVEL INVENTIVO	
WO0054587	NIVEL INVENTIVO	

LITERATURA NO PATENTES		
Documento	Relevancia	Reiv. afectadas

Observaciones	
FECHA DEL EXAMEN	30/07/2007
	Art.45:03 -07-2007