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**SUPERINTENDENCIA DE INDUSTRIA  
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E. S. D.

SUPERINDUSTRIA Y COMERCIO  
Radicacion : 03037692 00000002 Folios: 2  
Fecha (AMD): 2004-03-02 16:32:21  
Tramite : 011 PCT-PATENT 379 FASE NACI 530 PETICION  
Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

REF.: Expediente No. 03 037.692 solicitud de Patente FASE NACIONAL  
Corresp. a la Solicitud Internacional PCT/US01/50044  
a nombre de **KIMBERLY – CLARK WORLDWIDE, INC.**  
Titulada: PRODUCTOS DE PAPEL TRATADOS CON EMULSIONES DE-  
ACEITE-EN-AGUA

**RAMIRO CASTRO DUQUE**, vecino de Bogotá, portador de la tarjeta profesional No. 1003 del Consejo Superior de la Judicatura, obrando como apoderado de la Sociedad **KIMBERLY – CLARK WORLDWIDE, INC.**, según lo acredita el documento de poder protocolizado en la Secretaría General bajo el No. 17397, de acuerdo con el Artículo 44 de la Decisión 486 de la Comisión de la Comunidad Andina, me permito solicitar que se examine si la invención contenida en la solicitud en referencia es patentable.

De acuerdo con lo anterior, me permito anexar el recibo oficial de caja No. 04-12,714 por valor de \$353.000.

Señor Superintendente,



**RAMIRO CASTRO DUQUE**  
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T.P. No.1003 del C.S.J.  
Cra. 7 No. 16-56 Piso 9

Marzo 01, 2004  
CHP/MEV/har.

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NIT : 800176089-2

SUPERINDUSTRIA Y COMERCIO  
Radicacion : 83837692 00000002 Folios: 2  
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RECIBO OFICIAL DE CAJA : 04 - 12,714  
FECHA : FEBRERO 18 DE 2004

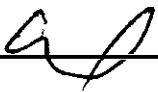
\*\*\*\*\* CONSIGNACION \*\*\*\*\*

| DEPOSITANTE           | TIPO PAGO    | BANCO         | CUENTA      | No. PAGO | FECHA PGO  | Vr. PAGO      |
|-----------------------|--------------|---------------|-------------|----------|------------|---------------|
| BRIGARD & CASTRO LTDA | CONSIGNACION | BANCO POPULAR | 050-00110-6 | 12685974 | 18/02/2004 | 24,796,000.00 |

\*\*\*\*\* CONCEPTO \*\*\*\*\*

| CANT. | RENTISTICO  | CONCEPTO                             | TOTAL CONCEPTO |
|-------|-------------|--------------------------------------|----------------|
| 1     | 50005-01-01 | SOLICITUDES                          |                |
|       |             | 85 EXAMEN DE PATENTABILIDAD DE INVEN | 353,000.00     |
|       |             | TOTAL :                              | \$ 353,000.00  |

SON: TRESCIENTOS CINCUENTA Y TRES MIL PESOS

RESPONSABLE : \_\_\_\_\_ 

RECIBO DE CAJA APLICADO AL EXPEDIENTE No. \_\_\_\_\_

**DIVISION DE NUEVAS CREACIONES**

**RADICACIÓN EXPEDIENTE No. 03-37692**

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

**PCT, FUE PUBLICADO EN LA GACETA DE PROPIEDAD INDUSTRIAL No 533,**

**DE FECHA 31 DE OCTUBRE DE 2003, EL TERMINO HABIL SEÑALADO POR**

**LA LEY EXPIRA EL 30 DE ENERO DE 2004.**

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

**SE PRESENTARON OPOSICIONES POR PARTE DE TERCEROS.**

**SI** \_\_\_\_\_

**NO** \_\_\_\_ **X** \_\_\_\_

# United States Patent

Smith et al.

(11) Patent Number 4,559,157  
(12) Date of Patent Dec. 17 1983

- (54) COSMETIC APPLICATION USEFUL FOR  
SKIN MOISTURIZING
- (75) Inventors: James A. Smith, CM Tipping, James  
E. Kelly, Wausau, both of N.J.
- (78) Assignee: Cosmetics Products Research  
Associates, Ltd., Chelsea, N.J.

(21) Appl. No.: 897,383

(22) Filed: Apr. 21, 1983

(31) Int. Cl. \_\_\_\_\_ B26D 3/00

(32) U.S. Cl. \_\_\_\_\_ 261/59; 261/91;  
64/77; 64/78; 671/23; 671/25; 15/104.03;  
15/104.05; 156/9; 156/9; 654/232.1

(33) Field of Search: 64/77; 26; 261/90;  
261/91; 671/23; 26; 15/104.03; 156/9; 654/232.1

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COSMETIC APPLICATION USEFUL FOR SKIN  
MOISTURIZING

## BACKGROUND OF THE INVENTION

The present invention relates to cosmetic applications comprising absorbent sheets impregnated with an oil-in-water emulsion comprising various emulsifiers which are useful for moisturizing skin surfaces and which are particularly adapted for moisturizing wet skin surfaces.

A variety of cosmetic sheets are adapted for skin working and cleaning are commercially available. Such products comprise paper or fabric sheets which are coated with an aqueous solution of a water-soluble emulsifier, detergent, and polyethylene glycol. These sheets may also contain large amounts of chemical absorbent which function to dry the skin upon their use. The sheets are adapted for use in a variety of applications, such as a drying function. One typical application of the sheets is to dry the skin upon their use. The sheets are adapted for use in a variety of applications, such as a drying function. One typical application of the sheets is to dry the skin upon their use.

Oil-based emulsions, on the other hand, possess excellent moisturizing properties but are less useful when skin is wet as the emulsifier oils tend to clump and spread unevenly when applied thereto.

It is, therefore,



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not this surface when said applicator is contacted with said skin under conditions of pressure wherein the emulsion comprises about 35-55% water, about 4-15% emulsifier oil, about 10-10% emulsifier amine, water-soluble, 5-10% poly- $\alpha$ -olefin alcohol emulsifier and about 0.5-10% detergent.

2. The emulsion applicator of claim 1 wherein the emulsifier was emulsifier is selected from the group consisting of polyol fatty acid esters, fatty alcohols or sulfates thereof, and the emulsifier oil is selected from the group consisting of mineral oil or a fatty acid ester of a C<sub>12</sub>-C<sub>18</sub> alkyl alcohol or mixture thereof.

3. The emulsion applicator of claim 2 wherein the water-soluble detergent is selected from the group consisting of C<sub>12</sub>-C<sub>18</sub> primary alkyl sulfates, C<sub>12</sub>-C<sub>18</sub> alkyl (dimethylamino) oxides, C<sub>12</sub>-C<sub>18</sub> alkyl(2-hydroxyethyl) amine oxides, C<sub>12</sub>-C<sub>18</sub> alkyl(2-hydroxyethyl) amine oxides, cocamide-propyl(dimethylamino) amine oxides and mixtures thereof.

4. The emulsion applicator of claim 1 wherein the emulsion further comprises fragrance and at least one bacteriostatic preservative.

5. The emulsion applicator of claim 4 wherein the bacteriostatic preservatives comprise at least one C<sub>1</sub>-C<sub>8</sub> lower alkyl 4-hydroxybenzoate preservative.

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6. The emulsion applicator of claim 1 wherein the paraffin sheet is a sheet of nonwoven textile consisting of a mixture of hydrophobic and hydrophilic fibers.

7. The emulsion applicator of claim 6 wherein the nonwoven textile sheet is formed from a blend of polyester and rayon fibers in a ratio of about 70-75:25-30 and wherein the weight ratio of said emulsion to said sheet is about 1-4:1.

8. The emulsion applicator of claim 6 wherein the nonwoven textile sheet is formed from a blend of polyester and rayon fibers in a ratio of about 70-75:25-30 and wherein the weight ratio of said emulsion to said sheet is about 6-10:1.

9. The emulsion applicator of claim 1 wherein the emulsion further comprises about 0.05-1.5% of a plurality of bacteriostatic preservatives and 0.05-1.5% fragrance.

10. The emulsion applicator of claim 9 wherein the emulsion comprises about 35-55% water, about 1.5-5% of a mixture of glyceryl monostearate and cetyl alcohol, about 4-15% of a mixture of mineral oil and lauryl isopropyl myristate, about 5-15% of a mixture of propylene glycol and glycerol and about 1-10% of a mixture of C<sub>12</sub>-C<sub>18</sub> alkyl (dimethyl) amine oxides and sodium lauryl sulfate.

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| PCT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | WORLD INTELLECTUAL PROPERTY ORGANIZATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                    |
| INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                    |
| (51) International Patent Classification: <sup>7</sup><br>A61K 7/48                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | A1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | (12) International Publication Number: WO 96/44609 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | (43) International Publication Date: 3 November 1996 (95.11.03)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                    |
| (21) International Application Number: PCT/US95/11148                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | (30) Designated States: AR, AU, AM, AT, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CO, CZ, DE, DK, DM, EE, ES, FI, GB, GR, HU, IL, IN, JP, KR, KZ, LI, LU, MC, MG, MK, MN, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TR, TM, TN, TT, UA, UG, US, VN, YU, ZA, ZW. ARIPO patent (CH, CN, DE, ES, FR, GB, GR, IL, IN, JP, KR, KZ, LI, LU, MC, MG, MK, MN, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TR, TM, TN, TT, UA, UG, US, VN, ZA, ZW). European patent (AM, AR, AT, AU, BE, BR, CA, CH, CN, CO, CZ, DE, DK, DM, EE, ES, FI, GB, GR, HU, IL, IN, JP, KR, KZ, LI, LU, MC, MG, MK, MN, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TR, TM, TN, TT, UA, UG, US, VN, ZA, ZW). |                                                    |
| (22) International Filing Date: 20 April 1995 (95.04.20)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                    |
| (23) Priority Date: 07/10/79 (95.10.07) 20 April 1989 (89.04.20) 26 August 1989 (89.08.26)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | US US                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                    |
| (72) Applicant: KIMBERLY-CLARK WORLDWIDE, INC. (IPC): 401 North Lake Street, Menasha, WI 54956 (US).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                    |
| (74) Inventors: KEECE/KEE, Duane, Counsel: 1112 East Main Street, Appleton, WI 54911 (US); KIELASO, Ronald, Mark: 3134 South Westlawn Lane, Appleton, WI 54915 (US); LANCHE, Ruth, Agent: 415 South Ohio Street, 1010, Appleton, WI 54911 (US); OYER, David, Richard: 100 North Kensington Drive, Appleton, WI 54915 (US).                                                                                                                                                                                                                                                                        |  | Published<br>With international search report.<br>Before the expiration of the time limit for amending the claims and for extending the scope of the protection.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                    |
| (74) Agents: CHARLES, Patrick, A. or P., Kimberly-Clark Worldwide, Inc., 401 N. Lake St., Menasha, WI 54956 (US).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                    |
| (54) Title: NEW BARBER SHAMPOO AND SHAMPOO THERAPY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                    |
| (57) Abstract:<br>A shampooable hair conditioning product, such as foamed foam, bath foam or paper towel and the like, can be made by applying, on the surface(s) of the foam, a 10-40 weight percent hydrophilic copolymer comprising a hydrophilic solvent, a high molecular weight polyethylene glycol, a fatty alcohol (C12-C18 or greater), isosorbide, an oil-in-water emulsifying surfactant having an HLB range greater than 7 or 8-10, and a material for or oil, and thereafter conditioning the composition to form a distribution of solid composition on the surface(s) of the foam. |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                    |

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**Skin Barrier Enhancing Absorbent Tissues**

**Field of the Invention**

5 The present invention relates to the inclusion of a lipid-enriched hydrophilic lotion on absorbent tissue products, such as facial tissues, bath tissues, paper towels, and the like. More particularly, the present invention relates to improving skin health via enhancement of skin barrier function by the delivery of lipids and humectants from a hydrophilic lotion from said absorbent tissue products to the skin.

**Background of the Invention**

15 The stratum corneum is the outer-most layer of the skin and is responsible for regulating skin water levels and functioning as a barrier against chemicals and other stressors found in the environment. The complex arrangement of lipids in the intercellular space of the stratum corneum is responsible for the establishment of normal barrier function. Multi-layered structures of cholesterol, ceramides, and fatty acids, as well as some other minor lipids, provide the major barrier to the transport of hydrophilic substances into the or through the skin. The link between the barrier function and skin health is apparent from the skin inflammation caused by lipid extraction from the skin.

25 Skin barrier can be damaged due to a number of mechanisms. Physical abrasion, for example caused by the repeated rubbing of absorbent tissue products on the skin, strips away layers of the skin and thus damages skin barrier. Biological fluids, such as urine, feces, nasal and vaginal secretions, may contain a variety of components that can damage skin barrier. Examples of these components include proteases, lipases, bile acids, and fatty acids. Once the skin barrier is compromised, these components, in addition to other constituents of biological fluids, can initiate or exacerbate skin inflammation.

30 Excessive hydration also has a negative impact on skin barrier. The hydration level of diapered skin, for example, may reach between five to ten times that of undiapered skin. Frequent contact of diapered skin with fluids such as nasal secretion

35 may also contribute to increased skin hydration. Increased skin hydration disrupts skin lipid organization in the stratum corneum. This disruption may increase the skin permeability irritants, thus increasing the risk of skin inflammation.

40 Typically, topically applied barrier creams, lotions and ointments are used to provide an artificial hydrophobic barrier on the skin. These products typically contain mineral oils, petrolatum and silicones that are heavy, greasy to the touch and are typically used to treat, rather than prevent skin irritation. In some instances, such as individuals suffering from sore, irritated noses during a cold, these products are avoided due to their poor cosmetic value to the consumer.

45 Absorbent tissue products such as facial tissues and bath tissues have been used to absorb body fluids and leave the skin dry. Absorbent tissues, in addition to absorbing fluids, however, also abrade the skin during use and frequently do not leave the skin completely dry and free of the body fluid the tissue is trying to absorb. During frequent nose-blowing or perianal wiping, for example, the skin can become so abraded as to appear red and be sore to the touch. To reduce skin abrasion, tissue additive formulations can be applied to the tissue such that, in use, the additive formulation either provides lubricity causing the tissue to glide across the surface of the skin, or leaves the tissue and is deposited on the skin.

55 Once deposited on the skin, these additive formulations provide a skin benefit by occluding the skin. Thus, these formulations provide a short-term benefit by providing an artificial barrier even though the underlying stratum corneum is still damaged.

60 To date, these formulations have been wax-based semi-solids or solids at room temperature. Since these formulations are lipophilic, it is sometimes difficult to incorporate hydrophilic or water soluble surfactants, cosmetic materials or other active ingredients that can provide a skin health benefit.

65 Thus, there is a need for a formulation that is basically hydrophilic that can be applied to a tissue which will remain readily available for transfer to the user's skin to protect, maintain, and aid recovery of skin barrier function and thus protect the skin from irritation, inflammation, and redness in an efficient cost-effective manner.

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70 Thus, what is further needed in the art is formulation chemistry that, when applied from an absorbent tissue, enhances the skin's barrier function while minimizing or eliminating the physical damage caused by the rubbing of the said absorbent tissue on the skin surface.

75 Summary of the invention

It has now been discovered that a skin barrier enhancing tissue product can be made applying, on the surface(s) of the tissue, a lipid-enriched melted hydrophilic composition comprising a hydrophilic solvent, a high molecular weight polyethylene glycol 80 a fatty alcohol (C<sub>14</sub>, C<sub>16</sub> or greater), a humectant, an oil-in-water emulsifying surfactant having an HLB range greater than 7, a sterol, and a natural fat or oil, and thereafter resolidifying the composition to form a distribution, preferably a uniform distribution, of solid deposits on the surface(s) of the tissue. Because the hydrophilic composition is a solid at room temperature and rapidly solidifies after deposition, it has less tendency to penetrate and migrate into the sheet. Compared to tissues treated with liquid formulations, this leaves a greater percentage of the added anhydrous solid lotion composition on the surface of the tissue where it can contact and transfer to the user's skin to provide a benefit. Furthermore, a lower add-on amount can be used to deliver the same benefit at a lower cost because of the efficient placement of the composition 85 substantially at the surface of the product.

Hence, in one aspect, the present invention is a hydrophilic composition comprising from about 10 to about 85 weight percent hydrophilic solvent, from about 5 to about 85 weight percent high molecular weight polyethylene glycol (preferably having a molecular weight of about 720 or greater), from about 1 to about 30 weight percent of a C<sub>14</sub> to C<sub>16</sub> or greater fatty alcohol, from about 0.5 to about 30 weight percent of humectant, from about 1 to about 20 weight percent emulsifying surfactant having an HLB range greater than 7, from about 0.1 to about 10 weight percent of sterol or sterol derivative, and 100 from about 0.1 to about 30 weight percent of natural fats or oils. The hydrophilic composition may have a melting point from about 30 °C. to about 100 °C. The composition may also have a penetration hardness of from about 5 millimeters to 380 millimeters.

105 In another aspect, the invention resides in a tissue product wherein one or both of the outer surfaces of the product have solidified deposits of a composition comprising from about 10 to about 85 weight percent hydrophilic solvent, from about 5 to about 85 weight percent high molecular weight polyethylene glycol (preferably having a molecular weight of about 720 or greater), from about 1 to about 30 weight percent of a C<sub>14</sub> to C<sub>16</sub> or greater fatty alcohol, from about 0.5 to about 30 weight percent of humectant, from about 1 to about 20 weight percent emulsifying surfactant having an HLB range greater than 7 110 from about 0.1 to about 10 weight percent of sterol or sterol derivative, and from about 0.1 to about 30 weight percent of natural fats or oils. The hydrophilic composition may have a melting point from about 30°C. to about 100°C. The composition may also have a penetration hardness of from about 5 millimeters to 380 millimeters.

In another aspect, the present invention is a method of making a soft tissue or towel product that enhances skin barrier comprising: (a) heating a hydrophilic composition comprising a hydrophilic solvent, high molecular weight polyethylene glycol, a fatty alcohol, a humectant, an emulsifying surfactant having an HLB range greater than 7 120 a sterol or sterol derivative and a natural fat or oil to a temperature above the melting point of the composition, causing the composition to melt; (b) uniformly applying the melted composition to one or both surfaces of the tissue web; and, (c) resolidifying the melted composition. The hydrophilic composition may have a melting point of from about 30 °C. to about 100 °C.

Detailed Description of the invention

130 One embodiment of the present invention is a tissue or towel product having two outer surfaces. One or both outer surfaces of the product have solidified deposits of a composition that enhances skin barrier. The composition may comprise from about 10 to about 85 weight percent hydrophilic solvent, from about 5 to about 85 weight percent high molecular weight polyethylene glycol having a molecular weight of about 720 or greater from about 1 to about 30 weight percent of a C<sub>14</sub> to C<sub>16</sub> or greater fatty alcohol, from about 0.5 to about 30 weight percent of humectant, from about 1 to about 20 weight percent of oil-in-water emulsifying surfactant having an HLB range greater than 7, from about 0.1 to about 10 weight percent sterol and sterol derivative, and from about 0.1 to about 30 weight percent of natural fats or oils.

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We claim:

- 785 1 A tissue or towel product having two outer surfaces, wherein one or both outer surfaces of the product have a hydrophilic composition that enhances skin barrier compliance:  
from about 10 to about 95 weight percent hydrophilic solvent;  
from about 5 to about 95 weight percent high molecular weight polyethylene glycol having a molecular weight of about 720 or greater  
790 from about 1 to about 30 weight percent of a C<sub>12</sub> to C<sub>20</sub> or greater fatty alcohol;  
from about 0.5 to about 30 weight percent of humectant;  
from about 1 to about 20 weight percent of oil-in-water emulsifying surfactant having an HLB range greater than 7;  
795 from about 0.1 to about 10 weight percent steroid and steroid derivative; and, from about 0.1 to about 30 weight percent of natural fats or oils.
- 2 The product of Claim 1 wherein said composition having a melting point from about 30° C to about 100 °C.
3. The product of Claim 1 wherein said composition has a penetration hardness of from about 5 millimeters to about 380 millimeters.
4. The product of Claim 1 wherein the add-on amount of said composition is from about 0.5 to about 30 weight percent based on the weight of said product.
5. The material of Claim 1 wherein the add-on amount of said composition is from about 0.1 grams per meter squared (g/m<sup>2</sup>) to about 30 g/m<sup>2</sup> of said material
6. The product of Claim 1 wherein said hydrophilic solvent is water
- 7 The product of Claim 1 wherein said hydrophilic solvent is propylene glycol.

- 8 The product of Claim 1 wherein said hydrophilic solvent is a low molecular weight polyethylene glycol.
- 9 The product of Claim 1 wherein said hydrophilic solvent is glycerin.
- 10 The product of Claim 1 wherein said hydrophilic solvent is hydrogenated starch hydrolysate.
- 11 The product of Claim 1 wherein said fatty alcohol is cetyl alcohol
- 12 The product of Claim 1 wherein said fatty alcohol is stearyl alcohol.
- 13 The product of Claim 1 wherein said fatty alcohol is erucidyl alcohol.
14. The product of Claim 1 wherein said fatty alcohol is behenyl alcohol.
15. The product of Claim 1 wherein said molecular weight of said high molecular weight polyethylene glycol is from about 720 to about 1,840,000 daltons.
- 16 The product of Claim 1 wherein said molecular weight of said high molecular weight polyethylene glycol is from about 1,400 to about 440,000 daltons.
- 17 The material of Claim 1 wherein said high molecular weight polyethylene glycol is polyethylene glycol 1,400.
- 18 The material of Claim 1 wherein said high molecular weight polyethylene glycol is polyethylene glycol 8,000.
- 19 The material of Claim 1 wherein said high molecular weight polyethylene glycol is polyethylene glycol 10,000.

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- 20 The material of Claim 1 wherein said humectant is glycerin.
- 21 The material of Claim 1 wherein said humectant is sorbitol.
- 22 The material of Claim 1 wherein said humectant is hydrogenated starch hydrolysate.
- 23 The material of Claim 1 wherein said surfactant is glyceryl stearate SE.
- 24 The material of Claim 1 wherein said surfactant is glycol stearate SE.
- 25 The material of Claim 1 wherein said surfactant is emulsifying wax NF.
- 26 The material of Claim 1 wherein said sterol or sterol derivative is soy sterol.
- 27 The material of Claim 1 wherein said sterol or sterol derivative is cholesterol.
- 28 The material of Claim 1 wherein said sterol or sterol derivative is lanosterol.
- 29 The material of Claim 1 wherein said natural fat or oil is sunflower oil.
- 30 The material of Claim 1 wherein said natural fat or oil is borage oil.
- 31 The material of Claim 1 wherein said natural fat or oil is avocado oil.
- 32 A method of making a tissue or towel product having an outer surface comprising:  
(a) heating a composition that enhances skin barrier comprising a hydrophilic solvent, a high molecular weight polyethylene glycol, a fatty alcohol, a humectant, an oil-in-water emulsifying surfactant having an HLB range greater than 7, a natural fat or oil, and a

- 5 sterol or sterol derivative, to a temperature above the melting point of said composition, causing said composition to melt; (b) applying said melted composition to said outer surface of a liner or tissue material web; and (c) resolidifying said melted composition.
- 33 The method of Claim 32, wherein said composition having a melting point of from about 30 °C to about 100 °C.
- 34 The method of Claim 32, wherein said resolidified composition has a penetration hardness of from about 5 to about 380 millimeters.
- 35 The method of Claim 32, wherein said melted composition is applied by printing.
- 36 A skin barrier enhancing composition comprising from about 5 to about 90 weight percent hydrophilic solvent, from about 5 to about 95 weight percent high molecular weight polyethylene glycol having a molecular weight of about 720 or greater, from about 1 to about 25 weight percent of a C<sub>12</sub> to C<sub>20</sub> or greater fatty alcohol, from about 0.5 to about 10 weight percent of humectant, from about 1 to about 20 weight percent of oil-in-water emulsifying surfactant having an HLB range greater than 7, from about 0.1 to about 10 weight percent of sterol and sterol derivative.
- 37 The composition of Claim 36, wherein said composition having a melting point from about 30 °C to about 100 °C.
- 38 The composition of Claim 36, wherein said resolidified composition has a penetration hardness of from about 5 to about 380 millimeters.
- 39 The composition of Claim 36, wherein said hydrophilic solvent is selected from the group consisting of: water, propylene glycol, low molecular weight polyethylene glycol, glycerin, sorbitol, hydrogenated starch hydrolysate, silicone glycol, and mixtures thereof.

40 The composition of Claim 38, wherein said fatty alcohol is selected from the group consisting of: cetyl alcohol, stearyl alcohol, myristyl alcohol, behenyl alcohol, and mixtures thereof

41 The composition of Claim 38, wherein said high molecular weight polyethylene glycol is selected from the group consisting of: polyethylene glycols having a average molecular weight greater than 720 daltons.

42 The composition of Claim 38, wherein said humectant is selected from the group consisting of: glycerin, propylene glycol, sorbitol, polyethylene glycol, hydrogenated starch hydrolyzates, sodium PCA, potassium PCA, sodium lactate, and mixtures thereof

43 The composition of Claim 38, wherein said surfactant is selected from the group consisting of: glyceryl stearate SE, glyceryl stearate, glycol stearate SE, glycol stearate, emulsifying wax NF, and mixtures thereof

44 The composition of Claim 38, wherein said sterol or sterol derivative is selected from the group consisting of: cholesterol, sitosterol, stigmasterol, ergosterol, lanosterol, soy sterol, avocado sterols, cholesterol esters, sterol esters, as well as mixtures thereof

45 The composition of Claim 38 wherein said natural fat or oil is selected from the group consisting of: avocado oil, apricot oil, babassu oil, borage oil, camellia oil, carola oil, castor oil, coconut oil, corn oil, cottonseed oil, evening primrose oil, hydrogenated cottonseed oil, hydrogenated palm kernel oil, malted soybean oil, meadowfoam oil, palm kernel oil, phospholipids, rapeseed oil, palmitic acid, stearic acid, linoleic acid, stearyl alcohol, lauryl alcohol, myristyl alcohol, behenyl alcohol, rose hip oil, sunflower oil, and soybean oil.

46 The composition of Claim 38, wherein said amount of said hydrophilic solvent is from about 5 to about 80 weight percent.

47 The composition of Claim 38, wherein the amount of said hydrophilic solvent is from about 25 to about 75 percent.

48 The composition of Claim 38, wherein the amount of said high molecular weight polyethylene glycol is from about 5 to about 85 weight percent.

49 The composition of Claim 38, wherein the amount of said high molecular weight polyethylene glycol is from about 15 to about 50 weight percent.

50 The composition of Claim 38, wherein the amount of said fatty alcohol is from about 1 to about 30 percent.

51 The composition of Claim 38, wherein the amount of said surfactant is from about 1 to about 20 percent.

52 The composition of Claim 38, wherein the amount of said sterol or sterol derivative is from about 0.1 to about 10 percent.

53 The composition of Claim 38, wherein the amount of said natural fat or oil is from about 0.1 to about 30 percent.

54. A method for enhancing/restoring/maintaining skin barrier function skin of a user comprising the steps of:

- a) contacting a tissue or towel product on said skin of said user wherein said product comprises a skin barrier enhancing/restoring/maintaining composition that provides a skin barrier enhancing/restoring/maintaining benefit upon transfer of said composition to said user's skin;
- b) transferring at least a portion of said composition during use of said tissue or towel product; and,
- c) repeating steps a) and b) with one or more additional tissue or towel product with sufficient frequency to enhance/restore/maintain said skin barrier in an area of skin contacted by said liner or tissue material, relative

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to skin contacted by an equivalent tissue or towel product that does not  
comprise said skin barrier enhancing/restoring/maintaining composition,  
wherein said skin barrier enhancing/restoring/maintaining composition comprises: from  
16 about 5 to about 90 weight percent hydrophilic solvent, from about 5 to about 55 weight  
percent high molecular weight polyethylene glycol having a molecular weight of about 720  
or greater from about 1 to about 25 weight percent of a C<sub>14</sub> to C<sub>26</sub> or greater fatty alcohol  
from about 0.5 to about 10 weight percent of humectant, from about 1 to about 20 weight  
percent of oil-in-water emulsifying surfactant having an HLB range greater than 7 from  
20 about 0.1 to about 10 weight percent of sterol and sterol derivative.

55. The method of Claim 54 wherein said composition having a melting point from  
about 30°C. to about 100°C.

56. The method of Claim 54 wherein said recalcified composition has a process  
viscosity greater than about 50 centipoise.

57 The method of Claim 54, wherein said recalcified composition has a penetration  
hardness of from about 5 to about 380 millimeters.

58 The method of Claim 54, wherein said tissue or towel product comprising said skin-  
barrier enhancing/restoring/maintaining composition are used by said user on each use  
occasion.

59 The method of Claim 54, wherein said tissue or towel product which do not  
comprise a skin-barrier enhancing/restoring/maintaining composition are used by said  
user intermittently

60 The method of Claim 54, wherein said tissue or towel product comprising said skin-  
barrier enhancing/restoring/maintaining composition are used by a user whose skin is  
compromised and are used with sufficient frequency to improve skin-barrier function.

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**SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO  
DIVISION DE NUEVAS CREACIONES  
SOLICITUD VIA PCT**

2020  
Bogotá, D.C., 8 de octubre de 2006

Doctor  
**RAMIRO CASTRO DUQUE**  
Apoderado

Oficio No.  
11714

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|---------------|-------------------|-----------------|
| <b>ASUNTO</b> | <b>Radicación</b> | <b>03-37692</b> |
|               | <b>Trámite</b>    | <b>002</b>      |
|               | <b>Evento</b>     | <b>001</b>      |
|               | <b>Actuación</b>  | <b>430</b>      |
|               | <b>Folios</b>     | <b>017</b>      |

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**

- Para el presente estudio se tuvo en cuenta el capítulo descriptivo que se encuentra en los folios 44 a 70 y el capítulo reivindicatorio que se encuentra en los folios 71 a 78 que comprende cuarenta y cuatro (44) reivindicaciones.
- Se considerará la prioridad reivindicada sobre la solicitud de Estados Unidos No. 09/717,939 del 21 de noviembre de 2000.

**2. Objeto de la invención**

- La invención propuesta se refiere a productos de papel absorbentes con loción incorporada.

En la reivindicación independiente 1 se define un producto de papel absorbente para secar y acondicionar la piel de un usuario, dicho producto de papel comprende:

Un tejido de papel; y

Una loción aplicada a dicho tejido de papel, dicha loción comprende:

Agua en una cantidad de hasta alrededor de 90% por peso de dicha loción,  
Un componente emoliente en una cantidad de hasta alrededor de 20% por peso de dicha loción,  
Un componente de ácido graso en una cantidad de hasta alrededor de 50% por peso de dicha loción,  
Un componente emulsificador en una cantidad de hasta alrededor de 60% por peso de dicha loción,  
En donde el nivel de agregados de dicha loción es de entre alrededor de 1% a alrededor de 15% por peso de dicho producto de papel.

**En la reivindicación Independiente 18 se define una toalla de papel absorbente para secar y acondicionar la piel de un usuario, dicha toalla tiene un peso base de entre alrededor de 15 a alrededor de 45 libras por resma, dicha toalla comprende:**

**Un tejido de papel;**

**Una loción aplicada a dicho tejido de papel de manera tal que el nivel de agregados de dicha loción está entre alrededor de 1% a alrededor de 10% por peso de dicha toalla de papel, dicha loción comprende los siguientes componentes:**

- i) Agua en una cantidad de entre alrededor de 10% a alrededor de 75% por peso de dicha loción;**
- ii) Un componente emoliente en una cantidad de entre alrededor de 1% a alrededor de 15% por peso de dicha loción, dicho componente emoliente incluye benzoato de alquilo C<sub>12</sub> – C<sub>15</sub>.**
- iii) Un componente de alcohol graso en una cantidad de entre alrededor de 5% a alrededor de 40% por peso de dicha loción, en donde el componente de alcohol graso incluye un alcohol graso seleccionado del grupo que consiste de alcohol cetilo, alcohol estearilo, alcohol cetearilo, alcohol araquidilo, alcohol verilo, y combinaciones de los mismos; y**
- iv) Un componente emulsificador en una cantidad de entre alrededor de 1% a alrededor de 30% por peso de dicha loción, dicho componente emulsificador incluye por lo menos un emulsificador; y**
- v) Un componente acondicionador de la piel que comprende de entre alrededor de 5% a alrededor de 50% por peso de dicha loción, dicho componente acondicionador de la piel incluye un humectante, dicho humectante incluye glicerina.**

**En la reivindicación Independiente 27 se define un método para formar un producto de papel para secar y acondicionar la piel de un usuario, dicho método comprende:**

**Formar un tejido de por lo menos un suministro conteniendo fibras y agua;**

**Secar dicho tejido para remover el agua del mismo; y**

**Después, tratar dicho tejido secado con una loción de forma tal que dicha loción tiene un nivel de agregado de entre alrededor de 1% a alrededor de 15% por peso de dicho producto de papel, dicha loción comprende agua en una cantidad de hasta alrededor de 90% por peso de dicha loción, un componente emoliente en una cantidad de hasta alrededor de 20% por peso de dicha loción, un componente de alcohol graso en una cantidad de hasta alrededor de 50% por peso de dicha loción, un componente emulsificador en una cantidad de hasta alrededor de 40% por peso de dicha loción, y un componente acondicionador de la piel en una cantidad de hasta alrededor de 60% por peso de dicha loción.**

- Se afirma que existen diversas lociones para inhibir problemas de piel pero, aunque estas lociones pueden proporcionar numerosos beneficios a un usuario, se pensó que tal loción puede no ser fácilmente aplicada a los productos de papel. En particular, se pensó que un producto de papel aplicado con tal loción no podrá satisfactoriamente retener sus características de absorbencia para que todavía pueda ser usada para secar las manos de una persona. Como tal, se afirma que existe actualmente la necesidad de un producto de papel que pueda ser aplicado con una loción para que la piel de**

una persona pueda ser simultáneamente seca y humectada o suavizada por la loción.

- El objeto de la invención definido se catalogó como A61K 7/48 y A61K 7/50, según la Clasificación Internacional de Patentes (IPC<sup>7</sup>).

### **3. Claridad de la solicitud**

El artículo 28 de la Decisión 486 de la Comisión de la Comunidad Andina establece "La descripción deberá divulgar la invención de manera suficientemente clara y completa para su comprensión y para que una persona capacitada en la materia técnica correspondiente pueda ejecutarla".

- El capítulo descriptivo incluye intervalos numéricos acompañados por la expresión "alrededor" lo cual no confiere precisión ni claridad a la invención pues no es posible determinar cuán alrededor puede estar un número con respecto al intervalo designado. Por lo anterior, se recomienda eliminar dicha expresión del capítulo descriptivo, particularmente en los intervalos que figuran en las reivindicaciones.
- En conclusión, el capítulo descriptivo no cumpliría con el requisito de claridad de acuerdo con el artículo 28 de la Decisión 486.

El artículo 30 de la Decisión 486 de la Comisión de la Comunidad Andina establece que: "Las reivindicaciones definirán la materia que se desea proteger mediante la patente. Deben ser claras y concisas y estar enteramente sustentadas por la descripción.

Las reivindicaciones podrán ser independientes o dependientes. Una reivindicación será independiente cuando defina la materia que se desea proteger sin referencia a otra reivindicación anterior. Una reivindicación será dependiente cuando defina la materia que se desea proteger refiriéndose a una reivindicación anterior. Una reivindicación que se refiera a dos o más reivindicaciones anteriores se considerará una reivindicación dependiente múltiple".

- El capítulo reivindicatorio incluye intervalos numéricos acompañados por la expresión "alrededor" lo cual no confiere precisión ni claridad a la invención pues no es posible determinar cuán alrededor puede estar un número con respecto al intervalo designado. Por lo anterior, se recomienda eliminar dicho término en las reivindicaciones que lo contengan.
- En la reivindicación independiente 1 se plantea un producto de papel absorbente mencionando que comprende una loción. Esta loción está planteada en términos muy generales pues muchas lociones están compuestas por emolientes, ácidos grasos, emulsificadores, aditivos, lo cual tampoco permite comprender cuál es el alcance de la invención cosa que debe estar bien establecida con las reivindicaciones. Además de esto, existen muchas sustancias emolientes, muchos ácidos grasos, muchos emulsificadores y más aún aditivos. Este problema puede afectar la patentabilidad de la invención pues abarcaría el estado de la técnica fácilmente. Dado lo anterior se recomienda que la reivindicación independiente 1 se modifique de forma que incluya la naturaleza química de los componentes de la emulsión de forma que sea identificable el alcance de la invención.
- Dado el gran número existente de productos de papel que tienen una composición de loción emulsionada aplicada sobre ellos, es recomendable que las reivindicaciones tengan la formalidad de diferenciación entre preámbulo y parte caracterizante mediante la expresión "caracterizado por", donde el preámbulo sitúe el campo de la invención e incluya las características que ya

forman parte del estado de la técnica, y por otro lado, la parte caracterizante esté formada exclusivamente por los detalles técnicos que constituyen el aporte que se realiza con la solicitud.

- Las reivindicaciones 30 a 44 son dependientes de la reivindicación independiente 27 en la que se plantea un método para formar un producto de papel para secar y acondicionar la piel de un usuario. No obstante, en las reivindicaciones 30 a 44 se realiza una caracterización del método mediante los detalles técnicos del producto lo cual es incoherente e innecesario. Incoherente porque se esperaría que las reivindicaciones dependientes del método especificaran más características del método, e innecesario porque dichas características del producto ya se encuentran incluidas en las reivindicaciones dependientes para el producto. Dado lo anterior, se recomienda eliminar las reivindicaciones 30 a 44 o modificarlas de modo que no se especifique nuevamente el producto sino que se incluyan características del método las cuales estén sustentadas por la descripción.
- En conclusión, el capítulo reivindicatorio no cumpliría con el requisito de claridad de acuerdo con el artículo 30 de la Decisión 486.

**4. Determinación del estado de la técnica**

El artículo 16 de la Decisión 486 de la Comisión establece: "El estado de la técnica comprenderá todo lo que haya sido accesible al público por una descripción escrita u oral, utilización, comercialización o cualquier otro medio antes de la fecha de presentación de la solicitud de patente o, en su caso, de la prioridad reconocida.

Sólo para el efecto de la determinación de la novedad, también se considerará dentro del estado de la técnica, el contenido de una solicitud de patente en trámite ante la oficina nacional competente, cuya fecha de presentación o de prioridad fuese anterior a la fecha de presentación o de prioridad de la solicitud de patente que se estuviese examinando, siempre que dicho contenido esté incluido en la solicitud de fecha anterior cuando ella se publique o hubiese transcurrido el plazo previsto en el artículo 40."

- Se realizó el estudio de los documentos concernientes a la búsqueda preliminar internacional y se consideró el 21 de Noviembre de 2000 como fecha para el análisis del estado de la técnica.
- De acuerdo con lo establecido en el artículo 16 se determinó el estado de la técnica y se encontraron los siguientes antecedentes:

| No. | Documento No. | Título                                                         | Fecha de Publicación    |
|-----|---------------|----------------------------------------------------------------|-------------------------|
| 1   | US4559157     | "COSMETIC APPLICATOR USEFUL FOR SKIN MOISTURIZING"             | 17 de diciembre de 1985 |
| 3   | WO0064409     | "ARTICULO DE LIMPIEZA Y ACONDICIONADOR PARA LA PIEL O EL PELO" | 28 de junio de 2000     |

Respecto al estado de la técnica:

- En el documento **US4559157** (llamado D1 de aquí en adelante) se divulga la existencia de una hoja porosa impregnada con una emulsión que comprende una emulsión aceite en agua que comprende una fase oleosa con por lo menos un aceite emoliente y por lo menos una cera emoliente estabilizadora dispersada en una fase acuosa que comprende por lo menos un alcohol polihídrico emoliente, y por lo menos un surfactante orgánico soluble en agua donde dicha emulsión está adaptada para cubrir uniformemente una cantidad humectante eficaz de emoliente en una superficie mojada de la piel cuando el aplicador entra en contacto con la piel, donde la emulsión comprende:

50 – 85% de agua

4 – 12% de un aceite emoliente

3 – 10% de emoliente estabilizador aniónico

5 – 20% de un alcohol polihídrico; y

0.5 – 10% de surfactante

El emoliente estabilizador es seleccionado del grupo de poliol ésteres de ácidos grasos, alcoholes grasos o mezclas, y el aceite emoliente es seleccionado del grupo que consiste de aceite mineral o éster de ácido graso de un alcohol alquil  $C_1 - C_6$ .

La emulsión puede comprender adicionalmente fragancias y por lo menos un preservativo antibacterial.

El ejemplo I discute una formulación humectante para ser aplicada en dicha hoja porosa que comprende: 5% de agua, 10% de componente emoliente (glicerol y aceite mineral), 0.5% de alcohol graso (alcohol cetilo) y 8% de surfactante (monoestearato de glicerilo, óxido de lauril dimetil amina y lauril sulfato de sodio).

- En el documento **WO0064409** (llamado D3 de aquí en adelante) se divulga la existencia de productos de papel o toallas impregnadas con una composición que comprende de 10 a 95% de agua, de 5 a 95% de polietilenglicol, de 1 a 30% de un alcohol graso, de 0.5 a 30% de un humectante, de 1 a 20% de un emulsificador, de 0.1 a 10% de derivados de esteroides y de 0.1 a 30% de aceites naturales.

En D2 se enseña que la composición puede contener glicerina, alcohol cetilo, alcohol estearilo, alcohol behenilo, aceites como el de girasol, entre otros, lo cual se aplica sobre productos absorbentes de papel para beneficio de la piel del usuario.

## 5. Evaluación de los requisitos de patentabilidad

El artículo 14 de la Decisión 486 de la Comisión de la Comunidad Andina establece: "Los Países Miembros otorgarán patentes para las invenciones, sean de producto o de procedimiento, en todos los campos de la tecnología, siempre que sean nuevas, tengan nivel inventivo y sean susceptibles de aplicación industrial."

En cumplimiento con este artículo, se procedió a evaluar los requisitos de novedad, nivel inventivo y aplicación industrial con el fin de establecer la patentabilidad de la invención reivindicada en la solicitud en estudio.

**Evaluación de la Novedad**

El artículo 16 de la Decisión 486 de la Comisión de la Comunidad Andina establece:

**"Una invención se considerará nueva cuando no está comprendida en el estado de la técnica." "El estado de la técnica comprenderá todo lo que haya sido accesible al público por una descripción escrita u oral, utilización, comercialización o cualquier otro medio antes de la fecha de presentación de la solicitud de patente o, en su caso, de la prioridad reconocida.**

**Sólo para el efecto de la determinación de la novedad, también se considerará dentro del estado de la técnica, el contenido de una solicitud de patente en trámite ante la oficina nacional competente, cuya fecha de presentación o de prioridad fuese anterior a la fecha de presentación o de prioridad de la solicitud de patente que se estuviese examinando, siempre que dicho contenido esté incluido en la solicitud de fecha anterior cuando ella se publique o hubiese transcurrido el plazo previsto en el artículo 40."**

- Teniendo en cuenta que el producto de papel que se propone se encuentra planteado en la reivindicación independiente y especificado en las reivindicaciones de la solicitud, al comparar las composiciones y las proporciones de cada compuesto con respecto a la emulsión de agua en aceite revelada en D1 o D2, se puede demostrar que la materia contenida en las reivindicaciones 1 a 3 no sería nueva pues ya existen divulgados en el estado de la técnica productos de papel impregnados con composiciones de loción que son emulsiones agua en aceite, con proporciones que caen dentro de los intervalos de la reivindicación 1 y que tienen ácidos grasos, emulsificador y aditivos.**
- En conclusión, la invención definida en las reivindicaciones 1 a 3, se encontraría afectada en el requisito de novedad de acuerdo con el artículo 16 de la Decisión 486.**
- En conclusión, los requisitos de patentabilidad de la presente solicitud se encuentran afectados así:**

| <b>No.</b> | <b>Documento</b> | <b>Reivindicaciones Afectadas</b> | <b>Requisito que afecta</b> |
|------------|------------------|-----------------------------------|-----------------------------|
| <b>1.</b>  | <b>US4559157</b> | <b>1 – 3</b>                      | <b>Novedad</b>              |
| <b>2.</b>  | <b>WO0064409</b> | <b>1 – 3</b>                      | <b>Novedad</b>              |

**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.**

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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 CESPEDES DE VERGEL**  
Jefe de División de Nuevas Creaciones

El anterior requerimiento fue notificado por fijación en lista, de fecha 13 OCT. 2006

|                                     |                                                |
|-------------------------------------|------------------------------------------------|
| <b>CONCEPTO</b><br>TECNICO No. 1591 | <b>EXAMINADOR TECNICO</b><br>Código No. 202042 |
|-------------------------------------|------------------------------------------------|