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Señor

SUPERINTENDENTE DE INDUSTRIA Y COMERCIO
DIVISION DE NUEVAS CREACIONES

SUPERINDUSTRIA Y COMERCIO

Radicacion : 05080402 00000002

Folios: 10

Fecha (AMD): 2005-10-28 16:10:49

Tramite : 011 PCI-PATENT 3/9 FASE NACI 444 REPUESTA

Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

E. S. D.

Re: P1.-UNILEVER N.V.-Solicitud de Patente de Invención en Fase Nacional PCT para "COMPOSICIONES PARA EL TRATAMIENTO DEL CABELLO QUE COMPRENDEN UNA CERAMIDA, UN ESTER GRASO DE RETINOL Y UN ACEITE".-Clase A61K 7/06.-Expediente número 05-080.402.-

1. Me refiero al auto dictado por ese Despacho, notificado por fijación en lista el 23 de Septiembre de 2005.
2. Atentamente me permito manifestar a usted que el documento completo del Reporte de Examen Preliminar Internacional, expedido el 1 de Junio de 2005, correspondiente a la solicitud Internacional número PCT/EP03/02261, actualmente en trámite de Fase Nacional en ese Despacho, fue presentado junto con su traducción, con el petitorio de solicitud de patente radicada el 12 de Agosto de 2005. Adjunto copia del mismo con su traducción.
3. Ruego a usted tomar atenta nota de lo anterior y proceder de conformidad.

Señor Superintendente,


ALICIA LLORED RICAURTE

T.P. 53.215

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TRATADO DE COOPERACION DE PATENTES
PCT
REPORTE DE EXAMEN PRELIMINAR INTERNACIONAL

(PCT Artículo 36 y Regla 70)

Registro de referencia del solicitante o agente	PARA FUTURAS ACCIONES		Ver Notificación o Transmisión del Reporte de Examen Preliminar Internacional (Formato PCT/IPEA/416)
Solicitud Internacional No. PCT/EP 03/02261	Fecha de registro internacional (día/mes/año) 05.03.2003	Fecha de prioridad (día/mes/año) 18.02.2003	
Clasificación Internacional de Patentes (IPC) o clasificación nacional e IPC 7 A61K7/06			
Solicitante UNILEVER PLC et. al.			

1.	Este reporte de examen preliminar internacional ha sido preparado por esta Autoridad Examinadora Preliminar Internacional y se transmite al solicitante de conformidad con el Artículo 36.
2.	Este REPORTE consta de un total de 4 páginas, incluyendo la carátula. ☒ Este reporte también está acompañado de ANEXOS, es decir, páginas de descripción, reivindicaciones y/o dibujos que han sido modificados y son la base de este informe y/o páginas que contienen rectificaciones hechas ante esta Autoridad (ver Regla 70.16 y la Sección 607 de las Instrucciones Administrativas de conformidad con el PCT). Estos anexos constan de un total de 3 páginas.

3.	Este informe contiene indicaciones relacionadas con los siguientes ítems: I ☒ Bases del Reporte II ☐ Prioridad III ☐ No establecimiento de opinión respecto a novedad, nivel inventivo y aplicabilidad Industrial. IV ☐ Falta de unidad de invención V ☒ Afirmación razonada de conformidad con el Artículo 35(2) con respecto a novedad, nivel inventivo o aplicabilidad industrial; citaciones y explicaciones que sustentan dicha afirmación. VI ☐ Ciertos documentos citados VII ☐ Ciertos defectos en la solicitud internacional VIII ☐ Ciertas observaciones sobre la solicitud internacional
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Fecha de presentación de la demanda 01.03.2004	Fecha de terminación de este reporte 01.06.2005
Nombre y dirección de la autoridad internacional de examen preliminar: European Patent Office – P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk – Pays Bas Tel. +31 70 340 -2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Funcionario autorizado Minas, S Teléfono No. +31 70 340-3936

**REPORTE DE EXAMEN PRELIMINAR
INTERNACIONAL**

Solicitud internacional No. PCT/EP 03/02261

I. Bases del Reporte

1. Respecto a los elementos de la solicitud internacional: (Páginas de remplazo que han sido suministradas a la oficina receptora en respuesta a una invitación bajo el artículo 14 están referenciados en este reporte como "presentados originalmente" y no están anexos a este reporte dado que no contienen modificaciones (Reglas 70.16 y 70.17):

Descripción, Páginas

1-32 como se presentaron originalmente

Reivindicaciones, Números

1-15 presentadas con telefax el 02.07.2004

2. Respecto al idioma, todos los elementos marcados anteriormente estuvieron disponibles o fueron suministrados a esta Autoridad en el idioma en el cual la solicitud internacional fue presentada, a menos que se indique lo contrario bajo este ítem.

Estos elementos estuvieron disponibles o fueron suministrados a esta Autoridad en el idioma, el cual es:

- ☐ el idioma de una traducción suministrada para una búsqueda internacional (según la Regla 23.1 (b)).
☐ el idioma de una publicación de la solicitud internacional (según la Regla 48.3 (b)).
☐ el idioma de la traducción suministrada para el examen preliminar internacional (según las Reglas 55.2 y/o 55.3).

3. Respecto al nucleótido y/o secuencia amino ácida revelado en la solicitud internacional, se llevó a cabo el examen preliminar internacional según el listado de secuencia:

- ☐ contenido en la solicitud internacional en forma escrita.
☐ registrado junto con la solicitud internacional en forma legible por computador.
☐ proporcionado subsiguientemente a esta Autoridad en forma escrita.
☐ proporcionado subsiguientemente a esta Autoridad en forma legible por computador.
☐ Se ha proporcionado la afirmación respecto a la cual el listado de secuencia escrito proporcionado subsiguientemente no va más allá de la revelación en la solicitud internacional según se presentó.
☐ Se ha proporcionado la afirmación respecto a la cual la información presentada en forma legible por computador es idéntica al listado de secuencia escrita.

4. Las modificaciones han resultado en la cancelación de:

- ☐ la descripción, páginas
☐ las reivindicaciones, Nos.
☐ los dibujos, páginas

5. ☐ Este reporte ha sido establecido como si (algunas) de las modificaciones no se hubiesen hecho, ya que se ha considerado que van más allá de la revelación según se presentó, como se indicó en Casilla Suplementaria (Regla 70.2 (c)):

(Cualquier hoja de remplazo que contenga tales modificaciones debe ser referida bajo el ítem 1 y anexada a este reporte.)

6. Observaciones adicionales, si son necesarias:

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Re ítem V

Declaración razonada según el Artículo 35(2) respecto a novedad, nivel inventivo o aplicación industrial; citas y explicaciones que sustentan tal declaración

Se hace referencia a los documentos siguientes:

- D6: US-A-4 170 229 (OLSON B NEWELL) 9 de Octubre de 1979 (1979-10-09)
D7: DATABASE WPI Section Ch, week 199832 Derwent Publications Ltd, Londres, GB; Class D21, AN, 1998-365522 XP002256534 & JP 10 001423 A (KANEBO LTD) 6 de Enero 1998 (1998-01-06)
D9 EYRE Y OTROS: "El efecto de ingredientes relacionados con ceramida en la deposición de tintes de cabello" HCAPLUS, XP002238525.

V.2 Novedad (Artículo 33(2) del PCT)

No hay indicación en el arte anterior que revele una composición para el tratamiento del cabello que comprende todas las características técnicas esenciales de la materia objeto de la reivindicación 1. Por consiguiente, la materia objeto de las reivindicaciones 1 a 15 es novedosa.

V.3 Nivel Inventivo (Artículo 33(3) del PCT)

Los documentos D6, D7 y D9 son la relevancia particular en cuanto al nivel inventivo se refiere. No hay necesidad de combinar por lo menos tres documentos a fin de obtener la enseñanza para el uso como composición para el tratamiento del cabello. Así, todos los compuestos son ingredientes comunes para las composiciones para el tratamiento del cabello y ningún efecto especial se puede asignar para su combinación. Además, los usos diferentes expuestos en estos documentos, de hecho resuelven los mismos problemas (reivindicaciones 13 a 15) como la presente solicitud:

El documento D6 revela en el caso historial n°2 el efecto reparador sobre el cabello dañado de una composición para el tratamiento del cabello que comprende palmitato de retinol.

El documento D7 revela el uso de ceramidas para la prevención del daño (abertura de las puntas y rompimiento) del cabello. El documento D9 revela el uso de ingredientes relacionados con ceramidas como questamida y ceramida-II para el mejoramiento de la fijación del color de cabellos teñidos.

En vista de esto, la persona versada consideraría un procedimiento de diseño normal combinar aquellos agentes benéficos comunes para el cabello en composiciones para el tratamiento del mismo. Además, sería obvio, que tal composición resolvería los problemas que subyacen a la materia objeto de las reivindicaciones 13 a 15. La presente solicitud por lo tanto no satisface los requerimientos del Artículo 33(3) del PCT sobre este documento de la técnica anterior.

PATENT COOPERATION TREATY

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From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)

To:

JAMES, Helen, S.
UNILEVER PLC
Patent Division
Colworth House
Sharnbrook
Bedford MK44 1LQ
GRANDE BRETAGNE

RECEIVED
PATENT DEPARTMENT

- 2 JUN 2005

COLWORTH

Date of mailing
(day/month/year)

01.06.2005

Applicant's or agent's file reference

J3709(c)/Rex

IMPORTANT NOTIFICATION

International application No.

PCT/EP 03/02261

International filing date (day/month/year)

05.03.2003

Priority date (day/month/year)

18.02.2003

Applicant

UNILEVER PLC et al

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international
preliminary examining authority:



European Patent Office - P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk - Pays Bas
Tel. +31 70 340 - 2040 Tx: 31 651 epo nl
Fax: +31 70 340 - 3016

Authorized Officer

Cherqui, E

Tel. +31 70 340-2643



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEAA16)		
International application No. PCT/EP 03/02261	International filing date (day/month/year) 05.03.2003	Priority date (day/month/year) 18.02.2003	
International Patent Classification (IPC) or both national classification and IPC A61K7/06			
Applicant UNILEVER PLC et al			
1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of 4 sheets, including this cover sheet. ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of 3 sheets.			
3. This report contains indications relating to the following items: I ☒ Basis of the opinion II ☐ Priority III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV ☐ Lack of unity of invention V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI ☐ Certain documents cited VII ☐ Certain defects in the international application VIII ☐ Certain observations on the international application			
Date of submission of the demand 01.03.2004		Date of completion of this report 01.06.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 2040 Tx: 31 651 epo nl Fax: +31 70 340 3016		Authorized Officer Minas, S Telephone No. +31 70 340-3936 	

INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

International application No. PCT/EP 03/02261

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-32 as originally filed

Claims, Numbers

1-15 filed with telefax on 02.07.2004

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP 03/02261

110 112

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

- D6: US-A-4 170 229 (OLSON B NEWELL) 9 October 1979 (1979-10-09)
D7: DATABASE WPI Section Ch, Week 199832 Derwent Publications Ltd., London, GB; Class D21, AN 1998-365522 XP002256534 & JP 10 001423 A (KANEBO LTD) 6 January 1998 (1998-01-06)
D9: EYRE H ET AL: "The effect of ceramide-related ingredients on the deposition of hair dyes" HCAPLUS, XP002238525

V.2 Novelty (Article 33(2) PCT)

There is no indication in the prior art disclosing a hair treatment composition comprising all essential technical features of the subject matter of claim 1.
The subject matter of claims 1-15 is therefor new.

V.3 Inventive step (Article 33(3) PCT)

The documents D6, D7 and D9 are of particular relevance as far as inventive step is concerned. There is no need to mosaic at least three documents in order to obtain teaching for the use as hair treatment composition, as all compounds are common ingredients of hair treatment compositions and no special effect can be assigned to their combination. Furthermore the different uses set out in these documents solve indeed the same problems (claims 13-15) as the present application:

Document D6 discloses in case history n°2 the repairing effect on damaged hair of a hair treatment composition comprising retinol palmitate.

Document D7 discloses the use of ceramides for preventing damage (split ends and breakage) on hair.

Document D9 disclose the use of ceramide-related ingredients like questamide and ceramide-II for improving the colour-fastness of dyed hair.

In view of this, the skilled person would regard it a normal design procedure to combine those common hair benefit agents in hair treatment compositions. Furthermore it would be obvious, that such a composition would solve the problems underlying the subject matter of claims 13-15. The present application does therefor not fulfill the requirements of Article 33(3) PCT over this prior art document.

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REPUBLICA DE COLOMBIA
SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

Folio 113

2020
Bogotá D.C.,

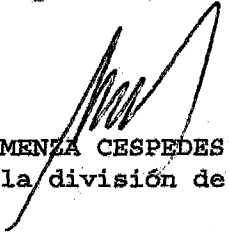
Doctor(a)
LLOREDA RICAURTE ALICIA
Apoderado(a) y/o Representante de
UNILEVER NV.

REFERENCIA	Radicación No.	05 80402
	Solicitud internacional	EP2003/002261
	Fecha inicio fase nacional	18/09/2005
	Trámite	11
	Evento	379
	Actuación	416
	Oficio No.	2167
	Folios	1

Teniendo en cuenta que la solicitud de privilegio de patente que se tramita bajo el expediente indicado en la referencia, reúne los requisitos de forma establecidos en la Decisión 486 de la Comisión de la Comunidad Andina, el Tratado de Cooperación en Materia de Patentes (PCT), el Reglamento y la Circular Única de la Superintendencia de Industria y Comercio, se envía el extracto de la solicitud a la Oficina de Comunicaciones para efecto de su publicación en la Gaceta de Propiedad Industrial.

Cúmplase
Dado en Bogotá DC,

12 DIC. 2005


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

adpa10

DIVISIÓN DE NUEVAS CREACIONES

RADICACIÓN EXPEDIENTE No. 05-80402

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

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

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

EXPIRA EL **31 DE JULIO DE 2007**

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

SE PRESENTARON OPOSICIONES POR PARTE DE TERCEROS.

SI _____

NO X

(19) 日本国特許庁 (JP)

(12) 公開特許公報 (A)

(11) 特許出願公開番号

特開平10-1423

(43) 公開日 平成10年(1998) 1月6日

(51) Int.Cl. ⁹	識別記号	庁内整理番号	FI	技術表示箇所
A 6 1 K	7/06		A 6 1 K	7/06
	7/08			7/08

審査請求 未請求 請求項の数 2 FD (全 6 頁)

(21) 出願番号 特願平8-175658

(22) 出願日 平成8年(1996) 6月14日

(71) 出願人 000000952

鐘紡株式会社

東京都墨田区墨田五丁目17番4号

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神奈川県小田原市寿町5丁目3番28号 鐘紡株式会社化粧品研究所内

(54) 【発明の名称】 毛髪処理剤

(57) 【要約】

【解決手段】セラミド、グルコシルセラミド、ガラクトシルセラミドより選ばれた少なくとも一種と、コレステロール、脂肪酸およびカチオン界面活性剤を必須成分とし、あるいは、上記に加えてワックスエステルおよびコレステロールエステルを必須成分とすることを特徴とする毛髪処理剤。

【効果】毛髪保護効果、保湿効果に優れ、滑らかさ、枝毛の発生防止効果等のコンディショニング効果をも兼ね備えた毛髪処理剤を提供し得る。

JP10001423

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

CLAIMS

[Claim(s)]

[Claim 1] Hair treatment characterized by a thing which was chosen from ceramide, a glucosylceramide, and galactosylceramide, and for which a kind, cholesterol and fatty acid, and a cationic surface active agent are used as an essential ingredient at least.

[Claim 2] Hair treatment characterized by a thing which was chosen from ceramide, a glucosylceramide, and galactosylceramide, and for which a kind, cholesterol and fatty acid, wax esters, a cholesterol ester, and a cationic surface active agent are used as an essential ingredient at least.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the hair treatment excellent in conditioning effects, such as a protective effect of hair, a moisturizing effect, and smoothness.

[0002]

[Description of the Prior Art] In recent years, consumers' individualization consciousness is established and various processings are made also about hair. However, for physical processing etc. of chemical preparation, such as a shampoo by the shampoo which, on the other hand, uses an anionic surface active agent as the main ingredients, and permanent waves, a dryer, brushing, etc., The cuticle and oil which have protected hair are removed, it becomes easy to generate split hair and piece hair, and the damage to hair -- smoothness is lost -- is increasing.

[0003] Therefore, it is used for hair treatment which is said to have conditioning effects, such as a hair protective effect, a moisturizing effect, and smoothness, in order to prevent these evils and which made the cationic surface active agent the active principle, such as a hair rinse agent, a hair conditioner, and a hair treatment. However, sufficient effect is not acquired about conditioning effects, such as a hair protective effect, a moisturizing effect, and smoothness, only with a cationic surface active agent.

[0004] Therefore, hair treatment, such as the conventional hair rinse agent, a hair conditioner, and a hair treatment, is the purposes of improving these faults, and blending oil and fat, such as higher alcohol, glyceride, and a liquid paraffin, is proposed. Blending silicone oil (for example, JP,63-222109,A) or blending an animal protein derivative are proposed in order to prevent damage to hair, and the fall of moistness (for example, JP,5-85921,A). *h/mw:dr d*

[0005] However, although a certain amount of effect can be acquired in respect of a hair conditioning effect improvement by using oil and fat, such as higher alcohol, glyceride, and a liquid paraffin, neither a hair protective effect nor a moisturizing effect can fully be satisfied. The hair moisturizing effect of silicone oil is insufficient, and the actual condition of an animal protein derivative is that the satisfying thing is not obtained in conditioning effects, such as smoothness.

[0006] On the other hand, when several sorts of lipid components were combined by the specific ratio, the liquid crystal structure was formed comparatively easily and this invention persons proposed excelling in a moisturizing effect (JP, 7-187987, A). This gazette is related with "the skin cosmetic characterized by the thing which was chosen from ceramide, a glueosylceramide, and galactosylceramide, and which use a kind, and cholesterol, fatty acid and a water soluble polymer as an essential ingredient at least." The effect is in what "the skin is improved or restored for in the healthy state by rising and maintaining the moisture retaining function of the skin."

[0007] That this invention persons should apply the art indicated in the above-mentioned gazette not only to the "skin" but to the field of "hair", as a result of inquiring wholeheartedly, by combining a cationic surface active agent with these specific lipid components, It excelled in hair protection and a moisturizing effect, and found out that the hair treatment which has conditioning effects, such as occurrence prevention of admiration and split hair, gently could be obtained, and this invention was completed.

[0008] This invention has a hair protective effect and a moisturizing effect, and an object of this invention is to provide the hair treatment which has conditioning effects, such as occurrence prevention of smoothness and split hair.

[0009]

[Means for Solving the Problem] In order to attain the above-mentioned purpose, hair treatment of this invention takes the following composition. That is, it is the hair treatment which was chosen from ceramide, a glueosylceramide, and galactosylceramide and which uses a kind, and cholesterol, fatty acid and a cationic surface active agent as an essential ingredient at least. In order to heighten a conditioning effect more, it is the hair treatment which added wax esters and a cholesterol ester to the above-mentioned ingredient.

[0010]

[Embodiment of the Invention] Hereafter, an embodiment of the invention is described in detail.

[0011] The ceramide, the glueosylceramide, and galactosylceramide which are used for this invention are a compound which exists in the epidermis of the mammals, such as a person, a pig, a cow, a horse, and a sheep, at a minute amount. [And [biochemistry,], physiology, OBU, the ** skin, The 363rd page - the 381st page (Biochemistry and Physiology of the Skin, Oxford University Press Inc., 1983, New York), It is possible to obtain a journal, OBU, lipid, a research, the 24th volume, the 131st page - the 140th page, 1983 (Journal of Lipid Research, Volume 24-1983), etc. with the usual extraction method from reference] and these animal epidermis. in addition -- in this invention -- JP, 61-271205, A and a biochemistry experiment document (the edited by Japanese

Biochemical Society.) The ceramide, the glueosylceramide, and galactosylceramide which are obtained by the manufacturing method etc. which are indicated by Tokyo Kagaku Dojin can also be used in the biochemistry of lipid, a biochemistry experiment lecture, the 3rd volume, 20-21 pages, and 1974.

[0012]As for the cholesterol used for this invention, the thing of an animal or vegetable origin is used.

[0013]The fatty acid used for this invention is the saturated fatty acid, the unsaturated fatty acid, straight-chain fatty acid, or branched chain fatty acid of the carbon numbers 12-40. The thing of the range of the carbon numbers 14-22 is [among these] preferred as what can be obtained easily. Saturation branched chain fatty acid, such as 2-heptylundecanoic acid obtained by composition, is also mentioned as a desirable thing.

[0014]As for the cationic surface active agent used for this invention, alkyl chloride trimethylammonium (the carbon number of an alkyl group is 16 to 22) or chloridation dialkyl dimethylammonium (the carbon number of an alkyl group is 16 to 22) is mentioned. As a desirable example, cetyltrimethylammonium chloride, stearyl chloride trimethylammonium, chloridation distearyldimethylbenzylammonium, etc. are mentioned.

[0015]The wax esters used for this invention are the ester species of the shape of liquid acquired by esterifying higher alcohol (carbon numbers 3-40) of saturation or an unsaturation, a straight chain, or a side chain, and fatty acid (carbon numbers 8-40) of saturation or an unsaturation, a straight chain, or a side chain etc. to a solid state. As a desirable example, myristic acid octyldodecyl, pulmitic acid isostearyl, myristic acid isocetyl, etc. are mentioned.

saturation
8: 57
pg: 9

[0016]The cholesterol ester used for this invention can be obtained by esterifying cholesterol of saturated fatty acid or unsaturated fatty acid, straight-chain fatty acid or branched chain fatty acid, vegetation, or animal origin etc. For example, cholesterol palmitate, cholesterol stearate, lanolin fatty acid cholesteryl, etc. are mentioned.

[0017]The ceramide, the glueosylceramide, the galactosylceramide, cholesterol, fatty acid, the wax esters, and the cholesterol ester which are used for this invention are named generically, and it is defined as a "lipid component."

[0018]The composition ratio of the lipid component for acquiring the effect of this invention preferably is as follows. that is, it was chosen out of ceramide, a glueosylceramide, and galactosylceramide when the "weight ratio" showed the numerical value range of each ingredient which constitutes claim 1 -- in 0.5-5.0, and cholesterol, 0.5-5.0, and fatty acid become [a kind] 2.0-20.0 at least. In the case of claim 2, ceramide, a glueosylceramide, Even if small, ***** which was chosen from galactosylceramide and from which 0.1-10.0, and a cholesterol ester become [a kind / 0.5-5.0 and cholesterol / 0.5-5.0 and fatty acid] 0.2-3.0 in 2.0-20.0, and wax esters is desirable. On the basis of the total amount of a drug product, 0.01 to 50.0% of the weight, a cationic surface active agent is [0.01 to 10.0 % of the weight] desirable still more preferred, and the above-mentioned indispensable lipid total amount is [a lipid total amount] 0.1 to 5.0 % of the weight of cationic surface active agents 0.1 to 30.0% of the weight.

[0019]The hair treatment of this invention can be used for all the cosmetics applied to

hair, For example, a pre shampoo agent, a shampoo, hair rinse, hair conditioner, Hair treatment, a setting lotion, a Boras tiling lotion, Hair dye etc. are contained hair spray, a foamy style agent, a gel form style agent, liquid pomade, hair cream, the 1st agent of permanent waves, the 2nd agent of permanent waves, the agent for pre permanent waves, permanent hair dye, and temporarily.

[0020]The use can respond also as a pharmaceutical form and it can be considered as the various gestalten of solution, an ethanol solution, an emulsion, suspension, gel, a liquid crystal, a solid, aerosol, etc.

[0021]All the ingredients which can be blended with hair treatment other than the above-mentioned essential ingredient can be blended with the hair treatment of this invention in the range which does not spoil the effect of this invention.

[0022]For example, triglyceride, such as a liquid paraffin, vaseline, and squalane, Various oil components, such as dibasic acid esters, such as higher alcohol and dicetyl adipate, and cholesterol sulfate, Ester of polyoxyethylene alkyl ether, polyhydric alcohol, and fatty acid, Nonionic surface active agents, such as ester of sugars and fatty acid, alkyl ether sulfate, Anionic surface active agents, such as an amino acid system surface-active agent and olefin sulfonate, Ampholytic surface active agents, such as a sulfonic acid type surface-active agent, a betaine type surface-active agent, and an imidazoline type surface-active agent, A cellulosic and other water soluble polymers, such as methyl cellulose, hydroxycellulose, and cation-ized cellulose, Moisturizers, such as ethylene glycol, propylene glycol, and glycerin, polypeptide, a germicide, an anti-dandruff agent, a chelating agent, an ultraviolet ray absorbent, colorant, perfume, etc. are mentioned.

[0023]Next, although an example is given and this invention is explained, this invention is not limited to these examples. Weight % shows loadings.

[0024]Examples 1-4, the comparative examples 1-4 (hair rinse)

Examples 1-4 are shown in Table 1, and the presentation of the comparative examples 1-4 is shown in Table 2. These constituents were prepared by the usual method. Each test method used by the example and the comparative example is as follows.

[0025](A hair protective effect, a moisturizing effect, and a conditioning effect) The hair of the Japanese woman who has not performed permanent wave treatment is tied up into a knot for 10 g (15-20 cm), After sodium-dodecyl-sulfate solution's washing 10% and fully rinsing, After applying each hair treatment uniformly and rinsing for 30 seconds with warm water, the menu of desiccation with towel dry cleaning and a dryer and brushing of a fixed count was repeated 3 times, and "the generation rate of split hair", a "moisturizing effect", "the smoothness of hair", and "the gloss of hair" were evaluated. Each evaluation was performed on the following standards.

"The generation rate of split hair"

O; a "moisturizing effect" with many [the increase in **; split hair to which the increase in O; split hair to which the increase in split hair is not accepted is hardly accepted] increases in x; split hair accepted a little, "smoothness of hair", "gloss of hair"

O; -- very good O; -- a little good **; -- it is not so good -- x; -- bad [0026]

[Table 1]

原料成分	実施例			
	1	2	3	4
セラミド	1.5	1.5	1.5	1.5
コレステロール	1.5	1.5	1.5	1.5
ステアリン酸	8.0	8.0	8.0	8.0
ミリスチン酸イソセチル	—	2.0	—	2.0
コレステロールパルミテート	—	1.0	1.0	—
塩化セチルトリメチル アンモニウム	2.0	2.0	2.0	2.0
精製水	残 余	残 余	残 余	残 余

[0027]

[Table 2]

原料成分	比較例			
	1	2	3	4
セラミド	—	1.5	1.5	1.5
コレステロール	1.5	—	1.5	1.5
ステアリン酸	8.0	8.0	—	8.0
ミリスチン酸イソセチル	2.0	2.0	2.0	2.0
コレステロールパルミテート	1.0	1.0	1.0	2.0
塩化セチルトリメチル アンモニウム	2.0	2.0	2.0	—
精製水	残 余	残 余	残 余	残 余

[0028] The evaluation result of Examples 1-4 and the comparative examples 1-4 is shown in Table 3.

[0029]

[Table 3]

	枝毛の発生度	保湿効果	髪の滑らかさ	髪の艶
実施例 1	◎	◎	△	△
実施例 2	◎	◎	◎	◎
実施例 3	◎	◎	△	○
実施例 4	◎	◎	○	△
比較例 1	×	×	△	×
比較例 2	×	×	△	×
比較例 3	×	×	×	△
比較例 4	×	△	×	×

[0030]As compared with the constituent (Table 2: comparative examples 1-4) which does not fulfill the conditions of an essential ingredient, each constituent (Table 1: examples 1-4) of this invention showed like the statement the result of having excelled in Table 3. Although Example 2 was a constituent based on "a claim and claim 2", each item was most excellent including other constituents (examples 1, 3, and 4) based on "claim 1." The essential ingredient of claim 1 this Ceramide, a glucosylceramide, It can be said that the essential ingredient of claim 2 is related to wax esters and a cholesterol ester being added further to being a kind, cholesterol, fatty acid, and a cationic surface active agent at least in having been chosen out of galactosylceramide. That is, when the functional component was newly added, a synergistic effect shows up notably and the hair protective effect, moisturizing effect, and conditioning effect which are reduction which is a generation rate of split hair are enhanced.

[0031]Example 5 (hair treatment)

The result of having done the presentation of Example 5 and the practical use test is collectively shown in Table 4. These constituents were prepared by the usual method. The test method used in the example is as follows.

[0032](Practical use test) By the test subject of some 20 Japanese women of having performed permanent wave treatment, one day usually used the hair treatment in each example continuously for two weeks by the method, and "the generation rate of split hair", a "moisturizing effect", "the smoothness of hair", and "the gloss of hair" were evaluated. Each evaluation was performed on the following standards.

"The generation rate of split hair"

O; -- "smoothness of hair" when those who are not permitted the increase in x; split hair when there are 8-13 persons who are not permitted the increase in **; split hair when there are 14-17 persons who are not permitted the increase in more than 18 person O; split hair for those who are not permitted the increase in split hair are seven or less persons a "moisturizing effect", and "gloss of hair"

O; -- the person who answered that it was good -- more than 18 person O; -- **[when there are 14-17 persons who answered that it was good]; -- x[when there are 8-13 persons who answered that it was good]; -- the case where the person who answered that it was good is seven or less persons[0033]

[Table 4]

原料成分	配合量
グルコシルセラミド	0.6
コレステロール	0.6
2-ヘプチルウンデカン酸	6.0
パルミチン酸イソステアリル	3.0
コレステロールステアレート	0.3
塩化ステアリルトリメチルアンモニウム	1.5
流動パラフィン	0.5
スクワラン	0.5
トリイソステアリン酸グリセリル	0.3
セチルアルコール	2.0
グリセリン	10.0
カチオン化セルロース	0.2
香料	適量
精製水	残余
「実用テスト結果」	
枝毛の発生度	◎
保湿効果	◎
髪の滑らかさ	◎
髪の艶	◎

[0034]The hair treatment constituent of Example 5 of this invention showed the outstanding characteristic in Table 4 also in which item like the statement as a result of the practical use test.

[0035]Examples 6-9, the comparative example 5 (hair conditioner)

The result of having done the presentation of Examples 6-9 and the comparative example 5 and the practical use test is collectively shown in Table 5. The constituent was prepared by the usual method. Each test method used by the example and the comparative example is the same as that of the above "a hair protective effect, (moisturizing effect, and conditioning effect."

[0036]

[Table 5]

原料成分	実施例				比較例
	6	7	8	9	5
グルコシルセラミド	0.1	0.005	0.1	0.1	—
ガラクトシルセラミド	0.1	0.005	0.1	0.1	—
コレステロール	0.2	0.2	2.5	0.2	—
パルミチン酸	0.5	0.5	0.5	10.0	—
ミリスチン酸	0.1	0.1	0.1	0.1	—
オクチルドデシル					
コレステロールパルミテート	0.1	0.1	0.1	0.1	—
塩化セチルトリメチル	0.1	0.1	0.1	0.1	0.1
アンモニウム					
塩化ジステアリル	0.1	0.1	0.1	0.1	0.1
ジメチルアンモニウム					
ポリオキシエチレン	0.2	0.2	0.2	0.2	0.2
硬化ヒマシ油 (60B.O.)					
セチルアルコール	0.3	0.3	—	—	0.3
プロピレングリコール	2.0	2.0	2.0	2.0	2.0
1,3-ブチレングリコール	2.0	2.0	2.0	2.0	2.0
エタノール	30.0	30.0	30.0	30.0	30.0
精製水	残余	残余	残余	残余	残余
[諸試験結果]					
枝毛の発生度	◎	△	○	○	×
保湿効果	◎	○	△	○	×
髪の滑らかさ	◎	△	○	△	×
髪の艶	◎	○	△	△	×

[0037] Although the hair conditioner constituent (example 6) of this invention was a constituent based on "a claim and claim 2" like the statement, as compared with the constituent (comparative example 5) which does not fulfill the conditions of the essential ingredient of this invention, the result of many examinations showed the outstanding characteristic in Table 5 also in which item. The weight ratio of the lipid composition of this invention showed Examples 7-9 previously. Ceramide, a glueosylceramide, it was chosen out of galactosylceramide -- at least, in 0.5-5.0, and cholesterol, in order that 0.1-10.0, and a cholesterol ester may not fulfill [0.5-5.0, and fatty acid] the conditions of 0.2-3.0 in 2.0-20.0, and wax esters, a kind, although it was a little inferior to the effect of Example 6, as compared with the constituent (comparative example 5) which does not fulfill the conditions of the essential ingredient of this invention, the result of many examinations showed the outstanding characteristic also in which item.

[0038]

[Effect of the Invention] It is above clear like a statement hair treatment's of this invention to provide the hair treatment which was excellent in the hair protective effect and the moisturizing effect, and was excellent also in conditioning effects, such as

occurrence prevention of split hair and smoothness.

122 413

United States Patent [19]

Olson

[11] 4,170,229

[45] Oct. 9, 1979

[54] METHOD FOR IMPROVED HEALTH CARE OF HAIR AND SCALP USING A VITAMIN A AQUEOUS EMULSION

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[73] Assignee: Dominton Pharmacal, Inc., Norwich, N.Y.

[21] Appl. No.: 869,774

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[52] U.S. Cl. 128/67; 424/DIG. 4; 424/273 R; 424/319; 424/344

[58] Field of Search 424/DIG. 4, 273 R, 319, 424/344; 128/67

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Primary Examiner—James O. Thomas, Jr.

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[57] ABSTRACT

This invention relates to Vitamin A-containing crystal clear transparent aqueous sprayable emulsions for application to hair and scalp according to a spray-on then brush-in technique which has been found to effectively reduce itching, flaking of common dandruff and seborrhea, condition the hair and scalp, and, in some instances, reduce excessive falling hair.

(in dex)

3 Claims, No Drawings

METHOD FOR IMPROVED HEALTH CARE OF HAIR AND SCALP USING A VITAMIN A AQUEOUS EMULSION

BACKGROUND OF THE INVENTION

Crystal clear transparent emulsions of lanolin are described in the prior art such as in U.S. Pat. No. 3,052,609. Crystal clear aqueous solutions of higher fatty alcohols and higher fatty alcohol esters are described in U.S. Pat. No. 3,052,607. In the present invention, a method has been found to provide crystal clear transparent emulsions of Vitamin A as the primary active ingredient and Vitamin A in aqueous combination with thio-amino acids and thio-amino complexes with allantoin.

Vitamin A has a well established chemical structure. It is commercially available from a variety of sources. One such source is Roche Chemical Company of Nutley, New Jersey. Vitamin A is considered to be insoluble in water. Notwithstanding the widespread use of Vitamin A in ointment bases, cosmetics and topical pharmaceutical preparations, until the present invention, all Vitamin A-containing aqueous compositions comprised cloudy emulsions and grease-like masses. Application of these type materials to the hair and scalp have enjoyed limited use due to the greasy, and often messy, after-effect of their use. Consequently, hair and scalp problems of major importance to numerous people have received limited treatment.

A hair and scalp problem of widespread importance is the itching, scaling and sloughing of epidermal cells of the scalp referred to as common dandruff. "Dandruff" is known to be a complex condition. At the present time, it is believed that a dandruff condition involves several factors such as the presence of *Staphylococcus aureus* and *Pityrosporum ovale* skin bacteria along with oily, dead, surface epidermal cells. Growth of these microbes is believed to promote, or at least to be associated with, the itching, scaling and unpleasant appearance associated with increased desquamation of epidermal cells. Heretofore, successful anti-dandruff compositions have involved use of germicides in detergent bases many of which can be very harsh to the skin, hair and eyes.

Disorders of the scalp can also include a condition known as *Seborrhea Capitis*. This involvement is characterized by thick, yellowish greasy scales of the vertex and possibly covering most of the scalp. In many cases the hair may be matted with crusts. These crusts may vary in color. They frequently have a dirty, waxy appearance and comprise a most distressing cosmetic problem. When the scaling is dry it is given the medical diagnosis of *Pityriasis sicca* and when the scaling is oily, it is given the diagnosis of *Pityriasis oleosa*. Since there is no known cure for seborrhea type disorders, treatment must by necessity be aimed at the most effective method that will achieve symptomatic relief. Effective means of control should include a means for cleaning and clearing the scalp scales and oiliness. A suitable remedy will need to be non-irritating, non-sensitizing, non-toxic and non-oily since this condition is normally brought on by excessive oiliness.

Conditioning of the hair is often essential to good grooming. This is particularly the case if the hair is of fine texture or excessively dry. In other instances, conditioning is used when hair has become brittle or straw-like due to excessive use of hair dyes, bleaches and the like. With the advent of blow-dryers for the hair, exces-

sive exposure to heat can leave the hair in a limp and tortured state. Conditioners in common use comprise protein-enriched lotions, creams and numerous oil-based materials which are applied to the hair followed by rinsing to remove excess conditioner. The degree with which hair absorbs the conditioner varies both with the conditioner used and the state of the hair. Most, if not all, conditioners have a tendency to leave the hair with an oily-greasy feel which can be undesirable. The primary reason for this is that the amount of conditioner applied is in excess of the amount absorbed by each hair strand.

In literature publications such as in the Journal of the Society of Cosmetic Chemists of Great Britain, Vol. 10, Number 4, (1959) under an article entitled "The Sorption of Amino Acids from Shampoo on to Hair", by Herd, J. K., et al, it was demonstrated that amino acid sorption on to the hair occurs in a very uneven manner. Wide variation is noted along the hair shaft as determined at intervals outward from the root end. In order for effective conditioning of hair and improvement in manageability, even distribution of sorbed materials is desirable. Heretofore, no simple or economic means for accomplishing this objective has been available.

Disorders of the scalp can lead to a widespread problem known as "falling hair". Causes of this problem are not yet fully understood. While it is believed that heredity plays a major role, it is generally considered that this factor is not the only one at work. Other factors such as stress, poor nutrition and excessive oiliness of the scalp are also believed to be involved in the cause and effect of this problem.

Accordingly, the present invention has as its object to provide a method and composition for effectively controlling the itching, flaking and unsightly desquamation of epidermal cells referred to as common "dandruff".

It is another object of the invention to provide a method and composition for effectively controlling the oiliness of the scalp normally associated with *Seborrhea Capitis*.

It is still another object of the invention to provide a method and composition which are capable of effectively applying a non-greasy conditioner to individual strands of human hair in a manner of even distribution such that the hair acquires improved body, texture, shine and manageability.

It is a still further object of the invention to provide a method and composition which, in some instances at least, can effectively reduce the amount of falling hair in some persons.

SUMMARY OF THE INVENTION

This invention provides a crystal clear transparent aqueous emulsion of Vitamin A, singly or in combination with other active ingredients shown in the claims hereof which can be sprayed on to the hair and scalp as a fine mist and then brushed in with a conventional hand-held hair brush to yield even distribution of the emulsion throughout the hair and scalp. By application of inventive compositions in this manner, unexpected benefits accrue to hair and scalp. Heretofore, attempts to apply meaningful grooming aids, medicaments, hair beautifiers, hair and scalp conditioners and the like to human hair and scalp have been carried out by incorporating these type ingredients into bases and/or carrying materials such as shampoos, after-shampoo rinses, ointments, cloudy emulsions, pastes and the like. In so do-

ing, all such applications have had very limited acceptability. In the present invention, the degree of benefit achieved through use of very low concentrations of active ingredients without need for conventional bases and carrying materials has been totally unexpected. It has been found that very low concentrations of active ingredients will achieve superb results through use of the present compositions thus minimizing the amount of undesirable materials being put on to the hair and scalp to achieve these benefits. In addition, it has been totally unexpected the degree with which uniform distribution of materials to individual hairs of the human head occurs through use of the inventive process. While not wanting to be bound by any technical explanation herein, it is believed that the sprayable crystal-clear transparent emulsions are benefited by the apparent electrostatic charge generated in the hair brushing process with a hand held hair brush. It thus appears, for example, that the uniformity of distribution is directly related to the degree of electrostatic charge generated on the surface of individual hairs by this process. It will be apparent therefore, that the present invention overcomes a defect encountered in all previous attempts to apply various treatments to the hair and scalp. By the process of the present invention, in combination with use of the present crystal-clear transparent aqueous emulsions, effective ingredients for varied medicinal, beautifying and other purposes can now be applied to the hair and scalp in a manner exercising maximum potential from these ingredients while overcoming negative aspects of inefficient use of unwanted materials and the undesirable nature of applying unwanted materials to hair and scalp.

In preparing the crystal-clear emulsions of this invention highly purified Vitamin A should preferably be used such as Vitamin A palmitate available from Roche Chemical Company of Nutley, New Jersey under the designation PIMO/BH. To effect the emulsion, critical ratios of Vitamin A and emulsifier for the Vitamin A are employed. Water is then added in a special two-step process in order to achieve a stable, crystal-clear transparent system. Also, the time/temperature relationship for the addition of the water to the Vitamin A-emulsifier system is critical. Suitable emulsifiers, also having the capacity in some instances to function as partial solubilizers for the Vitamin A have been found to be surfactants such as polyoxyethylene fatty ethers available commercially under the trade name of "BRIJ" emulsifiers from ICI America, Inc., of Wilmington, Delaware. Preferred members of this group include polyoxyethylene cetyl ether, polyoxyethylene stearyl ether and polyoxyethylene oleyl ether. Other suitable emulsifiers comprise polyoxyethylene sorbitan fatty acid esters such as the "Tween" compounds available also from ICI America. Preferred members of the group include polyoxyethylene sorbitan monolaurate, polyoxyethylene sorbitan monopalmitate, polyoxyethylene sorbitan monostearate, and polyoxyethylene sorbitan monooleate.

PREFERRED EMBODIMENT OF THE INVENTION

The preferred method of preparing the crystal-clear emulsions of this invention comprises first mixing together Vitamin A and emulsifier in an amount ranging from 1 part Vitamin A to from 4 to 8 parts emulsifier. The mixture is then warmed to a temperature of from 35 to 40 degrees Centigrade. Water, which has been pre-

heated to the same temperature, is then added very slowly while maintaining slow stirring. The amount of water added should be in the range of 1 part mixture to 6 to 8 parts water. After addition of the water over a time period of from 2 to 3 minutes, the batch is cooled to 25 degrees Centigrade and placed on hold until it clears of any turbidity. Following this, additional water having a temperature of about 25 degrees Centigrade can be added to yield the desired dilution for specific purposes. Failure to follow directions rather precisely can lead to a cloudiness within the batch which can adversely affect stability. Attempts to "clear" the batch in those instances when cloudiness has remained after this phase have all met with failure.

In preparing the crystal-clear emulsions, other water-insoluble materials can be included in the original mixture along with Vitamin A and emulsifier. These materials include fragrances, anti-oxidants such as butylated hydroxy anisole (BHA) available from Eastman Chemicals Company in Kingsport, Tennessee, preservatives such as propylparaben available from Tenneco Chemicals Company in Saddle Brook, New Jersey and anti-dandruff ingredients such as allantoin and derivatives thereof available from Schuylkill Chemical Company, in Philadelphia, Pennsylvania. Preferred derivatives of allantoin include allantoin N-acetyl cystine, allantoin N-acetyl cysteine, allantoin N-acetyl DL methionine, aluminum hydroxy allantoin N-acetyl cystine, aluminum hydroxy allantoin N-acetyl cysteine, aluminum hydroxy allantoin N-acetyl DL methionine and the like.

Water-soluble additives can be added to the water-soluble phase of the crystal-clear solutions without affecting the clarity of the product. These additives include conditioners, preservatives, colorants and pH adjusting agents. Preferred conditioners comprise collagen, gelatin, wheat germ, amino acids and derivatives thereof. Preferred amino acids comprise thio-amino acids such as cystine, cysteine, and methionine. Preferred thio-amino acid derivatives include N-acetyl cystine, N-acetyl cysteine, N-acetyl methionine and the like.

Suitable preservatives include methylparaben available from Tenneco Chemicals Company, in Saddle Brook, New Jersey. Suitable colorants are available commercially as FD&C and D&C colors. Adjustment of pH can be made using sodium hydroxide, potassium hydroxide or other alkaline materials. Acidifying agents can also be used. These include acetic acid, citric acid, potassium dihydrogen phosphate, and hydrochloric acid. Chelating agents can be employed for pH adjustment purposes. These can include ethylenediamine tetraacetic acid or the alkali salt thereof such as disodium or tetrasodium.

The following specific examples are further illustrative of the nature of the present invention, but it is to be understood that the invention is not limited thereto. The compositions of these examples show amounts and proportions which are by weight unless otherwise specified.

EXAMPLE I

A crystal-clear water soluble solution of Vitamin A palmitate was obtained by mixing one part Vitamin A palmitate, five parts Brij 52, and one part propylparaben in a separate container and then warming to 40 degrees Centigrade while stirring gently. Fifty six parts water, preheated to 40 degrees Centigrade, is then added very slowly over a three minute period while maintaining

continued slow stirring. As soon as the water has been added, the batch is cooled to 25 degrees Centigrade and set aside for one hour to clear of turbidity and cloudiness. After the one hour period, five hundred parts water at 25 degrees Centigrade containing 1 part methylparaben is then added with continued slow stirring.

The final crystal-clear product is then placed in a plastic container equipped with a manually operated sprayer such as is available from Diamond International Corporation in New York, New York under the trade-name of "Mistette". The clear solution is then sprayed on to the hair and scalp and brushed in with several gentle strokes using a conventional hand-held hair brush. The brush should be equipped with several rows of bristles of sufficient length and stiffness to penetrate the hair of the human head to reach the scalp surface.

EXAMPLE II

Spray-on, Brush-in Crystal Clear Solution	
Ingredient	Amount
1. Vitamin A Palmitate	0.12
2. Tween 80	0.85
3. BHA	0.02
4. Allantoin	0.20
5. Propylparaben	0.16
6. De-ionized water	8.00
7. De-ionized water	90.45
8. Methylparaben	0.20

Add ingredients 1 through 5 in order of appearance to a separate container. Stir slowly while heating to 38 degrees Centigrade until clear homogenous solution results. Then add ingredient 6, de-ionized water preheated to 38 degrees Centigrade, to the container with continued slow steady stirring. After ingredient 6 has been added, the batch is set aside for one hour to clear of all turbidity. Ingredient 7, at approximately 25 degree Centigrade temperature, incorporating ingredient 8, is then added with slow stirring to complete the final product.

Apply the final product to hair and scalp according to the invention.

EXAMPLE III

Spray-on, Brush-in Crystal Clear Solution	
Ingredient	Amount
1. Vitamin A Palmitate	0.12
2. Tween 60	0.84
3. Fragrance	0.10
4. Brij 52	0.40
5. Water	8.00
6. Water	90.34
7. N-acetyl DL Methionine	0.20
8. Sodium hydroxide (N/1)	q.s.

Add ingredients 1 through 4 in order of appearance to a separate container. Stir slowly while heating to 40 degrees Centigrade until a clear homogenous solution results. Then add ingredient 5 preheated to 40 degrees Centigrade. After addition of ingredient 5 over a 3 minute period while maintaining steady slow stirring, the batch is cooled immediately to 25 degrees Centigrade by use of exposure to a cold water bath or cold water jacketed kettle. After approximately one hour, a solution made up of ingredients 6, 7 and 8 is added with continued slow stirring. Sufficient sodium hydroxide is added to the aqueous solution of ingredient 6 to yield a final pH of from 4.2 to 4.6.

Apply the final product to hair and scalp according to the invention.

EXAMPLE IV

Spray-On, Brush-In Crystal Clear Solution

A crystal-clear aqueous solution is prepared in accordance with Example III except that allantoin N-acetyl DL methionine is substituted for N-acetyl DL methionine.

CASE HISTORY NO. 1

White, male age 52 was having a problem with typical dandruff comprising itching, scaling and flaking. After one week of regular use of the composition of Example II according to the inventive process, no noticeable itching, scaling and flaking was perceived. The patient shampooed his hair at one week intervals using a non-anti-dandruff shampoo on a continuous basis which included before, during and after the test was in progress.

CASE HISTORY NO. 2

White, female, age 42 had a problem of dry, brittle and unmanageable hair. After one week of regular use of the composition of Example III according to the invention, the hair was soft, manageable and fluffy.

CASE HISTORY NO. 3

White, male, age 51 was losing approximately 50 to 60 head hairs each day as determined by wetting the hands and drawing the fingers, while in spread position, through the hair to remove loosened individual hairs. After 4 weeks of regular daily use of the composition of Example IV according to the inventive process, the daily loss of head hairs was reduced to approximately 12 to 20.

The use of the term "solution" in the aforementioned specification is not to be construed as meaning a true solution according to pure technical definition. It is rather to be construed as meaning a mixture which appears to the naked eye to be a solution, and accordingly, the word "solution" is to be construed as covering transparent emulsions.

The foregoing detailed specification has been given for the purpose of explaining and illustrating the invention. It is to be understood that the invention is not limited to detailed information set forth, and that various modifications can be made within each example herein provided without departing from the scope of the invention as defined by the appended claims.

I claim:

1. A method for treating conditions of hair and scalp to effect conditioning thereof and relief from dandruff symptoms, said method comprising spraying a fine mist of an aqueous emulsion in sufficient amount to effect moistening thereof and brushing said hair and scalp with a hand held brush having bristles, said brushing being carried out in sufficient number of strokes to effect even distribution thereof throughout said hair and scalp, said emulsion containing an effective amount of essential ingredient comprising Vitamin A palmitate and allantoin N-acetyl methionine.

2. Method of claim 1 wherein Vitamin A palmitate is present in the emulsion in the order of about 0.15% by weight.

3. Method of claim 1 wherein allantoin N-acetyl methionine is present in the emulsion in the order of about 0.2%.

* * * * *

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO
DIVISION DE NUEVAS CREACIONES

2020
Bogotá, D.C.

Abogado
ALICIA LLOREDA RICAURTE

ASUNTO	Radicación	05-080402
	Trámite	011
	Evento	379
	Actuación	430
	Oficio	5180
	Folios	017

Patente de Invención	☒	Patente de Modelo de Utilidad	☐
Vía Nacional	☐		
Vía PCT (fase nacional)	☒	Cap. I	☐
		Cap. II	☒
No. Sol. Internacional	<u>PCT/EP2003/002261</u>		
Fecha de Presentación Internal.	<u>05/03/2003</u>		

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

<u>Descripción:</u>	Folios <u>49-83</u> como se radicó inicialmente
<u>Reivindicaciones:</u>	Folios <u>84-86</u> como se radicó inicialmente
<u>Prioridad:</u>	Folio <u>1</u> 18/02/2003, GB, 0303733.0

2. Objeto de la invención

Título de la solicitud: COMPOSICIONES PARA EL TRATAMIENTO DEL CABELLO QUE COMPRENDEN UNA CERAMIDA, UN ÉSTER GRASO DE RETINOL Y UN ACEITE (folio 1).

El problema técnico planteado en esta solicitud esta relacionado con la necesidad de obtener nuevas composiciones que prevengan el daño y reparen el cabello dañado (folios 50; pág. 2).

Para solucionar este problema técnico la solicitud en estudio proporciona en: Reivindicaciones 1-10: una composición para el tratamiento del cabello que comprende:

- i) 0.0005% o más en peso de aceite insoluble en agua de una ceramida seleccionada del grupo ceramida I, ceramida II y mezclas de las mismas;
- ii) 0.0005% o más en peso de aceite insoluble en agua de un éter de ácido graso de retinol;
- iii) un aceite insoluble en agua.

y

Reivindicación 11: un método para preparar la composición de la reivindicación 1.

Reivindicación 12: un método para tratar el cabello con la composición de la reivindicación 1.

Reivindicaciones 13-15: el uso de una composición farmacéutica.

Clasificación Internacional de Patentes (IPC): A61K7/06, A61K7/075, A61P43/00.

3. Reivindicaciones relativas a un uso o a un segundo uso (artículos 14 y 21 D 486)

De acuerdo con los artículos anteriores, las reivindicaciones 13-15, relacionadas con el uso de una composición, no se consideran objeto de protección puesto que el uso no es un producto o un procedimiento tecnológico. Por lo que se recomienda al solicitante eliminarlas del alcance de la invención.

4. Determinación del Estado de la Técnica

Considerando que la fecha de presentación de la primera solicitud de patente de la que se reivindica prioridad es 18-02-2003, se buscaron documentos del estado de la técnica relacionados, con fecha de publicación anterior a ésta.

Nº	Documento	Título	Fecha de Publicación
D1	US4170229	Method for improved health care of hair and scalp using a vitamin A aqueous emulsion.	09-10-1979
D2	JP10001423	Hair-treatment agent	06-01-1998

Anterioridad D1 en folios 113-116 y D2 en folios 117-125.

5. Análisis de patentabilidad (artículo 14 D486)

5.1 Nivel inventivo (artículo 18 D486)

- Se solicita en las reivindicaciones 1-10, una composición para el cabello que comprende:
 - i) 0.0005% o más en peso de aceite insoluble en agua de una **ceramida** seleccionada del grupo ceramida I, ceramida II y mezclas de las mismas;
 - ii) 0.0005% o más en peso de aceite insoluble en agua de un **éster de ácido graso de retinol** (seleccionado de palmitato de retinilo, acetato de retinilo, propionato de retinilo y mezcla de los mismos).
 - iii) un **aceite insoluble en agua** (aceites minerales, aceites de ésteres y mezcla de los mismos; como aceites de coco, jojoba, soya ó mezcla de los mismos)

Composición anterior que es una composición de champú que contiene un surfactante (reiv. 8), o que es una composición acondicionadora permanente o enjuagable que contiene un surfactante acondicionador (reiv. 9-10).

En el estado de la técnica más cercano se encuentra D2, que divulga composiciones para el tratamiento del cabello, que contienen **ceramidas, ácidos grasos, ésteres de ácidos grasos y agentes surfactantes**, teniendo estas composiciones un efecto protector, acondicionador y humectante del cabello (folios 119, párrafos 005-009); Se señala que estas composiciones pueden ser aplicadas a diversos productos del cabello, por ej. champús, rinses, acondicionadores, tratamientos, lociones, colorantes, etc. (folio 121, párrafo 0019).

La solicitud se diferencia de D1 en que la composición posee un éster de retinol.

El Efecto Técnico que logra la diferencia es que se obtiene una composición que permite reparar el cabello dañado.

El Problema Técnico Objetivo de esta solicitud es obtener composiciones que permitan reparar el cabello dañado.

No obstante, D1 ya enseña composiciones para el tratamiento del cabello dañado (seco, frágil e inmanejable), que contienen **vitamina A (retinol)** como vitamina A palmitato a bajas concentraciones, por ej. 0,12%, 015% (folio 115, 116; col. 3, 6, ej. II y III), sola o en combinación con otros ingredientes activos (folio 114; col 2) y que puede incluir otros excipientes conocidos por los expertos (folio 115, col. 4); obteniendo como beneficio un cabello suave y manejable (folio 116; col. 6, caso 2).

Por lo anterior, se considera que la composición solicitada para el tratamiento del cabello (reivindicaciones 1-10) es obvia, para un experto en la materia, a las enseñanzas de D1 y D2 combinando agentes que benefician de manera común el cabello dañado, por lo que no tiene nivel inventivo.

- Se solicita en la reivindicación 11 un método de preparación de una composición que comprende:
 - i) Formar una primera mezcla con el aceite insoluble en agua, la ceramida y el éster de retinol, y
 - ii) Dispersar la primera mezcla con el resto de la composición

Las etapas de mezcla de los ingredientes principales y dispersión de la misma en el resto de la composición, son etapas comunes para un experto en la materia tal como lo señala D2 cuando divulga que la mezcla de ingredientes esenciales pueden ser mezclados con otros ingredientes usados para el tratamiento del cabello y que las composiciones enseñadas fueron preparadas por métodos usuales (folio 121; párrafo 0021 y 0024), razones por las que el método solicitado no tiene nivel inventivo.

- Se solicita en la reivindicación 12 un método un método para el tratamiento del cabello que comprende aplicar al mismo una composición según reivindicación 1.

La etapa de aplicar la composición al cabello corresponde a la forma usualmente conocida tanto por un experto en la materia como por un usuario de usar un producto para el cabello, por lo que el método solicitado no tiene nivel inventivo.

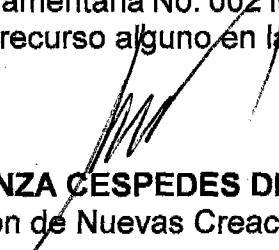
6. Conclusión

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

N°	Documento N°	Reivindicaciones Afectadas	Requisito que Afecta
D1	US4170229	1-12	Nivel inventivo
D2	JP10001423	1-12	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 artículo 8 de la resolución reglamentaria No. 00210 del 15 de enero de 2001, advirtiéndole que contra él no procede recurso alguno en la vía gubernativa.


ALIX CARMENZA CESPEDES DE VERGEL
Jefe de División de Nuevas Creaciones

El anterior requerimiento fue notificado por fijación en lista, de fecha
08 MAYO 2009

CONCEPTO TECNICO No. 1069	EXAMINADOR TECNICO Código No. 202079
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