ESCOBAR - URIBE ASOCIADOS

A B O G A D O S

Carrera 11A No 94-76 Of 305 P O Box 94948, Bogotá, Colombia S.A.
Tels. (571) 6162051 6162061 6161859 6161869
Fax (571) 6161869

85 81

As 2451/P

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

DIVISIÓN DE NUEVAS CREACIONES

E S D

SUPERINDUSTRIA Y COMERCIO
Radicacion : 01067832 00000005 Folios: 2
Fecha (AMD): 2004-02-11 16:24 07
Tramite : 002 PATENTES D 1 REGISTRO/ 530 PETICION
Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

Ref Expediente No 01-067 832
Solicitud de Patente a nombre de
Johnson & Johnson Consumer Companies, Inc

Yo, JIMENA ESCOBAR URIBE, identificada como aparece al pie de mi firma, domiciliada en Bogota, en la Carrera 11 A No 94-76 Of 305, obrando como apoderada de la sociedad Johnson & Johnson Consumer Companies, Inc , domiciliada en Skillman, New Jersey, Estados Unidos de America, solicitante de la patente de la referencia, pido a usted que se proceda a examinar si la invencion, cuya patente se tramita en el expediente de la referencia, es patentable

Adjunto al presente memorial el recibo No 04 - 9,286 de febrero 6 de 2004, por la suma de $353 000 oo, con lo cual queda cubierta la tasa oficial correspondiente a dicho estudio

Señor Superintendente,

JIMENA ESCOBAR URIBE
C C 39 779 452 de usaquen
T P 68 228
Cod 5376
JEU/ra

2451

SUPERINDUSTRIA Y COMERCIO
Radicacion : 01867832 00000005 Folios: 2
Fecha (AMD): 2004-02-11 16:24:07
Tramite 002 PATENTES D 1 REGISTRO/ 530 PETICION
Dependencia: 2020 DIVISION DE NUEVAS CREACIONES

NIT 900[illegible]687-2

RECIBO OFICIAL DE CAJA 04 9,235
FECHA FEBRERO 6 DE 2004

***** C O N S I G N A C I O N *****

DEPOSITANTE	TIPO PAGO	BANCO	CUENTA	No PASO	FECHA PGO	Vr PASO
CSCCBAR URIDE ASOCIADOS	CONSIGNACION	BANCO POPULAR	050-00110-6	4112053	05/02/2004	0,885 000 00

***** C O N C E P T O *****

CANT	CENTISTICO	CONCEPTO	TOTAL CONCEPTO
1	50005 01 01 SOLICITUDES	112 PTC CAP-I EXAMEN DE PATENTIBILIDA	353 000 00
		TOTAL $	353 000 00

SON TRESCIENTOS CINCUENTA Y TRES MIL PESOS

RESPONSABLE _____

RECIBO DE CAJA APLICADO AL EXPEDIENTE No _____

BF
83

DIVISION DE NUEVAS CREACIONES

RADICACIÓN EXPEDIENTE No **01-67832**

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

FUE PUBLICADO EN LA GACETA DE PROPIEDAD INDUSTRIAL No **531**, DE

FECHA **29** DE **AGOSTO** DE **2003**, EL TERMINO HABIL SEÑALADO POR LA

LEY EXPIRA EL **26** DE **NOVIEMBRE** DE **2003**

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 _____

Carrera 13 No. 27-00 Piso 5 y 10
Conmutador 334 12 21-2-3-4
Fax: 281 51 25 e-mail: info@sic.gov.co
Santa Fe de Bogotá D.C - Colombia

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6: C11D 1/38, 1/86, 3/30, 3/32 — A1

(11) International Publication Number: WO 98/00494

(43) International Publication Date: 8 January 1998 (08.01.98)

(21) International Application Number: PCT/US97/11680

(22) International Filing Date: 2 July 1997 (02.07.97)

(30) Priority Data:
9613947.2 3 July 1996 (03.07.96) GB

(71) Applicant (*for all designated States except US*): THE PROCTER & GAMBLE COMPANY [US/US]; One Procter & Gamble Plaza, Cincinnati, OH 45202 (US).

(72) Inventors; and
(73) Inventors/Applicants (*for US only*): BROOKS, Alan [GB/GB]; 17 Crown Meadow, Colnbrook, Slough SL3 0LJ (GB). DU REAU, Charles, Marie, Alain [FR/GB]; 73 Park Road, London W4 3EY (GB). ELLIOTT, Russel, Philip [GB/GB]; 24 Nobles Way, Egham, Surrey TW20 9RJ (GB).

(74) Agents: REED, T., David et al., The Procter & Gamble Company, 5299 Spring Grove Avenue, Cincinnati, OH 45217 (US).

(81) Designated States: BR, CA, CN, JP, MX, US, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
With international search report.

(54) Title: CLEANSING COMPOSITIONS

(57) Abstract

A liquid personal cleansing composition comprising: (a) from about 0.01 % to about 15 % by weight of a thickening system consisting essentially of associative polymer and polar oil selected from primary amines and alkanolamides; (b) from about 1 % to about 60 % by weight of water-soluble surfactant selected from anionic surfactant, nonionic, zwitterionic and amphoteric surfactants and mixtures thereof; (c) optionally, from about 0.01 % to about 5 % by weight of cationic polymeric skin conditioning agent; and (d) water, wherein the polar oil has an average carbon chain length of from about 10 to about 18 carbon atoms and wherein the water-soluble surfactants have an average carbon chain length of from about 10 to about 18 carbon atoms. The products provide excellent product thickening and rheological attributes, in storage, in dispensing and in-use, in combination with good efficacy benefits including excellent rinsability, mildness, skin conditioning, skin moisturising, good product stability cleansing and lathering.

8R 85

Hydrophobically Modified Hydroxyalkyl Cellulose Thickener

Cellulose ethers suitable for use herein, have, prior to hydrophobic modification, a sufficient degree of nonionic substitution selected from methyl, ethyl, hydroxyethyl and hydroxypropyl to cause them to be water-soluble The preferred degree of nonionic substitution is in the range of from about 1 8 to about 4 0, preferably from about 2 to about 3, and especially from about 2 2 to about 2 8 by weight. The cellulose ethers are then further substituted with alkyl or alkenyl groups having from about 10 to about 24, preferably from about 14 to about 18 carbon atoms in an amount of from about 0 1 to about 1, preferably from about 0 3 to about 0 8, and especially from about 0 4 to about 0 6 weight percent The cellulose ether to be modified is preferably one of low to medium molecular weight, i e , less than 800,000 and preferably between 20,000 and 700,000 (75 to 2500 D.P) Degree of polymerisation (D P) as defined herein, means, the average number of glycoside units in the polymer

Preferred cellulose ethers for use herein are selected from commercially available nonionic cellulose ethers such as hydroxy ethyl cellulose, hydroxy propyl methyl cellulose, hydroxy methyl cellulose, ethyl hydroxy ethyl cellulose and mixtures thereof

The preferred cellulose ether substrate, for use herein, is a hydroxyethyl cellulose (HEC) of from about 50,000 to about 700,000 molecular weight Hydroxyethyl cellulose of this molecular weight level is the most hydrophilic of the materials completed. Accordingly, control of the modification process and control of the properties of the modified product can be more precise with this substrate Hydrophilicity of the most commonly used nonionic cellulose ethers varies in the general direction hydroxyethyl > hydroxypropyl > hydroxypropyl methyl > methyl

The long chain alkyl modifier, for the cellulose ether, can be attached to the cellulose ether substrate via an ether, ester or urethane linkage The ether linkage is preferred. Although the modified cellulose ether materials are referred to as being "alkyl modified ", (the term alkyl

as used generally herein also includes using alkenyl) it will be recognised that except in the case where modification is effected with an alkyl halide, the modifier is not a simple long chain alkyl group The group is actually an alphahydroxyalkyl radical in the case of an epoxide, a urethane radical in the case of an isocyanate, or an acyl radical in the case of an acid or acyl chloride General methods for making modified cellulose ethers are taught in Landoll ('277) at column 2, lines 36-65

Highly preferred hydrophobically modified hydroxy ethyl cellulose (HMHEC) polymers suitable for use herein have a 1% aqueous viscosity in the range of from about 8,000 to about 50,000 mPas (Brookfield LVT viscometer, spindle No 4, speed 4)

Commercially available materials preferred for use herein include NATROSOL PLUS Grade 330 CS (TM), a hydrophobically modified hydroxyethylcellulose available from Aqualon Company, Wilmington, Delaware This material has a C_{16} alkyl substitution of from 0 4% to 0 8% by weight The hydroxyethyl molar substitution for this material is from 3 0 to 3 7 The average molecular weight for the water-soluble cellulose prior to modification is approximately 300,000 Also suitable for use herein is NATROSOL PLUS Grade 430 CS (TM)

Another material of this type is sold under the trade name NATROSOL PLUS CS Grade D-67 (TM), by Aqualon Company, Wilmington, Delaware This material has a C_{16} substitution of from 0 50% to 0 95%, by weight The hydroxyethyl molar substitution for this material is from 2 3 to 3 7 The average molecular weight for the water soluble cellulose prior to modification is approximately 700,000 Highly preferred for use herein are C_{14} - C_{18} alkyl and alkenyl modified hydroxy ethyl cellulose polymers having a degree of ethoxylation of from about 1 8 to about 3 2, preferably from about 2 0 to about 3 0, more preferably from about 2 2 to about 2 8 and an alkyl and alkenyl substitution level of from about 0.3 to about 0 8, preferably from about 0 4 to about 0 7, most preferably from about 5 5 to about 0 7 and especially about 0 65 Highly preferred are cetyl modified hydroxy ethyl cellulose polymers as available from the Aqualon Co under the trade names Polysurf 67 (TM) having a molecular weight of about 700,000

87 87

Hydrophobically Modified Alkoxylate Urethane Thickener

Hydrophobically modified water-soluble nonionic alkoxylated urethane polymers suitable for use herein are particularly valuable for providing excellent stability characteristics over normal temperature ranges (5°C to about 50°C) as well as delivering near Newtonian rheology behaviour at low shear rates in matrices comprising high surfactant levels, and for delivery of improved product thickening characteristics and rheological behaviour in combination with polar oil, selected from primary amines and alkanolamides, in a non-dilute, water-soluble surfactant system

Hydrophobically modified water-soluble nonionic alkoxylated urethane polymers are made by prepolymerisation of a diisocyanate with a polyol followed by end capping with primary amines or primary alcohols The resulting molecule is usually a linear block copolymer, with internal and terminal hydrophobes but branched and cross linked polymer can also be obtained

The polymerisation process is very complex and various resulting polymer structures can be formed as reviewed in the literature by Hulden (Colloids & Surfaces, 82, 263-277), Kaczmarski et al (Polym. Mater Sci. Eng., 67, 282-283), and Karunasena et al (Polymers in aqueous media, Advances in Chemistry Series, 223, 495-525) Further details on hydrophobically modified water-soluble nonionic alkoxylated urethane polymers as thickeners are discussed in the paper titled 'Polymers in Cosmetics', presented by Rohm & Haas as part of 'The Proceedings of the 20th National Congress of the Society of Italian Cosmetic Chemists 1993' at p29

Preferred hydrophobically modified water-soluble nonionic alkoxylated urethane polymers for use herein are described by Kaczmarski et al as linear block copolymers (which can be obtained by a step - growth process) and can have the following general structures

R^2-NHCO-NH-R^1[NH-CO-O-E_n-CH_2CH_2OCONH-R^1]$_x$-NHCO-NH-R^2

R^2-O-CONH-R^1[NH-CO-O-E_n-CH_2CH_2OCONH-R^1]$_x$-NH-CO-O-R^2

wherein. E_n is a polyol having the general formula, $(CH_2\ CH_2\ O)_n$, n can vary from 10 to 10,000, preferably from 10 to 1,000, and more preferably from 50 to 500, R^1 includes straight or branched chain alkyl, alkenyl or aromatic groups containing pending functional groups e g COOH, R^2 includes straight or branched chain alkyl, alkenyl or aromatic groups containing pending functional groups e.g. COOH and wherein R^2 is preferably selected from NH_2 or OH and wherein x represents the degree of polymerisation.

Preferred hydrophobically modified water-soluble nonionic alkoxylated urethane polymers suitable for use herein are those sold by Rohm & Haas under Acrysol 44 (TM), by Berol Nobel under Bermodol 2101 (TM), 2130 (TM) and Bermodol Pur 2100 (TM) and by Servo under the name Ser-Ad-FX-100 (TM)

Hydrophobically Modified Nonionic Polyols

Also suitable for use herein as thickeners are hydrophobically modified water-soluble nonionic polyols Suitable hydrophobically modified water-soluble nonionic polyols for use herein are fatty acid esters of glucosides such as PEG 120 methyl glucoside dioleate (available from Amercol under the trade name Glucamate DOE 120), PEG-150 pentaerythrityl tetrastearate (available from Croda under the trade name Crothix (TM)), PEG-75 dioleate (available from Keasco under the trade name PEG-4000 dioleate (TM)) and PEG-150 distearate (available from Witco under the trade name Witconal L32 (TM))

Polar Oil

A further essential feature of the thickening systems of the present invention is polar oil selected from primary amines and alkanolamides Polar oil is present in the cleansing compositions herein at a level of from about 0 01% to about 3%, preferably from about 0 01% to about 2%, more preferably from about 0 1% to about 1%, most preferably from about 0.2% to about 0 8% by weight.

Polar oil as defined herein, means, an organic oil, in liquid or waxy form, selected from primary amines and alkanolamides, and which, can interact with associative polymer, in the presence of a non-dilute water-soluble surfactant system to deliver excellent product thickening and rheology attributes

Amine and alkanolamide polar oils suitable for use herein include primary and secondary amines amd alkanolamides having an average carbon chain length of from about 10 to 18 carbon atoms

Exemplary polar oils suitable for use in the compositions according to the present invention include primary amines such as cocamine and alkanolamides such as cocamide MEA, PEG-3 cocamide, lauramide MEA, lauramide MIPA, lauramide DEA, cocamide DEA and mixtures thereof

Applicant has also found that the carbon chain length of the polar oil has an impact on the degree of product thickening delivered to non-dilute, water-soluble surfactant matrices by the thickening systems of the present invention. In general, preferred polar oils suitable for use herein have an average carbon chain length which is in the range of from about 10 to about 18, preferably from about 12 to about 16 and especially from about 12 to about 14 carbon atoms Particularly preferred for use herein are systems wherein the average carbon chain length of the polar oil is substantially similar to the average carbon chain length of the non-dilute, water-soluble surfactant system. Substantially similar average carbon chain length, as defined herein, means, carbon chain lengths within two,

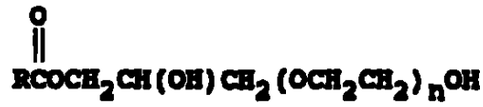
preferably one, carbon units difference, i e, C_{12} is defined herein as substantially similar to C_{14}

Polar oils having an average carbon chain length of from about 12 to about 14 carbon atoms on the alkyl chain are preferred in the cleansing compositions according to the invention, as surfactants having an average carbon chain length of from about 12 to about 14 carbon atoms are highly desirable for the delivery of good foaming properties

As herein before discussed, particularly suitable for use in the thickening system of the present invention are polar oils having a chain length substantially similar to that of the chosen surfactant system Preferred polar oils for use herein are cocamide MEA (available as Empilan CME (TM) from Albright and Wilson), cocamide DEA (available as Empilan CDE (TM) from Albright and Wilson), lauramide MEA (available as Empilan LME (TM) from Albright and Wilson) and cocamine (available as Adagen 160D (TM) from Witco)

The present compositions can also comprise an auxiliary nonionic or anionic polymeric thickening component, especially a water-soluble polymeric materials, having a molecular weight greater than about 20,000 By "water-soluble polymer" is meant that the material will form a substantially clear solution in water at a 1% concentration at 25°C and the material will increase the viscosity of the water Examples of water-soluble polymers which may desirably be used as an additional thickening component in the present compositions, are hydroxyethylcellulose, hydroxypropyl cellulose, hydroxypropyl methylcellulose, polyethylene glycol, polyacrylamide, polyacrylic acid, polyvinyl alcohol (examples include PVA 217 from Kurary Chemical Co , Japan), polyvinyl pyrrolidone K-120, dextrans, for example Dextran purified crude Grade 2P, available from D&O Chemicals, carboxymethyl cellulose, plant exudates such as acacia, ghatti, and tragacanth, seaweed extracts such as sodium alginate, propylene glycol alginate and sodium carrageenan. Preferred as the additional thickeners for the present compositions are natural polysaccharide materials Examples of such materials are guar gum, locust bean gum, and xanthan gum Also suitable

The compositions of the invention may also contain from about 0 1% to about 20%, preferably from about 1% to about 15%, and more preferably from about 2% to about 10% by weight of an oil derived nonionic surfactant or mixture of oil derived nonionic surfactants Oil derived nonionic surfactants are valuable in compositions according to the invention for the provision of skin feel benefits both in use and after use Suitable oil derived nonionic surfactants for use herein include water soluble vegetable and animal-derived emollients such as triglycerides with a polyethyleneglycol chain inserted, ethoxylated mono and di-glycerides, polyethoxylated lanolins and ethoxylated butter derivatives One preferred class of oil-derived nonionic surfactants for use herein have the general formula (XII)



wherein n is from about 5 to about 200, preferably from about 20 to about 100, more preferably from about 30 to about 85, and wherein R comprises an aliphatic radical having on average from about 5 to 20 carbon atoms, preferably from about 7 to 18 carbon atoms

Suitable ethoxylated oils and fats of this class include polyethyleneglycol derivatives of glyceryl cocoate, glyceryl caproate, glyceryl caprylate, glyceryl tallowate, glyceryl palmate, glyceryl stearate, glyceryl laurate, glyceryl oleate, glyceryl ricinoleate, and glyceryl fatty esters derived from triglycerides, such as palm oil, almond oil, and corn oil, preferably glyceryl tallowate and glyceryl cocoate

Suitable oil derived nonionic surfactants of this class are available from Croda Inc (New York, USA) under their Crovol line of materials such as Crovol EP40 (PEG 20 evening primrose glyceride), Crovol EP 70 (PEG 60 evening primrose glyceride) Crovol A-40 (PEG 20 almond glyceride), Crovol A-70 (PEG 60 almond glyceride), Crovol M-40 (PEG 20 maize glyceride), Crovol M-70 (PEG 60 maize glyceride), Crovol PK-40 (PEG 12 palm kernel glyceride), and Crovol PK-70 (PEG 45 palm kernel glyceride) and under their Solan range of materials such as Solan E, E50 and X polyethoxylated lanolins and Aqualose L-20 (PEG 24

According to a further aspect of the invention there is provided a personal cleansing composition comprising:

(a) from about 0.01% to about 15% by weight of a thickening system consisting essentially of associative polymer and polar oil selected from primary amines and alkanolamides,

(b) from about 1% to about 60% by weight of water-soluble surfactant selected from anionic surfactant, nonionic, zwitterionic and amphoteric surfactants and mixtures thereof,

(c) optionally, from about 0.01% to about 5% by weight of hydrotrope,

(d) optionally, from about 0.01% to about 5% by weight of cationic polymeric skin conditioning agent, and

(e) water

wherein the polar oil has an average carbon chain length of from about 10 to about 18 carbon atoms and wherein the water-soluble surfactants have an average carbon chain length of from about 10 to about 18 carbon atoms and wherein the ratio of total water-soluble surfactant level to total hydrotrope level is in the range of from about 5 : 1 to about 1 : 5.

The compositions according to the present invention can also comprise lipophilic emulsifiers as skin care actives. Suitable lipophilic skin care actives include anionic food grade emulsifiers which comprise a di-acid mixed with a monoglyceride such as succinylated monoglycerides, monostearyl citrate, glyceryl monostearate diacetyl tartrate and mixtures thereof.

What is claimed is

1 A liquid personal cleansing composition comprising

(a) from about 0 01% to about 15% by weight of a thickening system consisting essentially of associative polymer and polar oil selected from primary amines and alkanolamides,

(b) from about 1% to about 60% by weight of water-soluble surfactant selected from anionic surfactant, nonionic, zwitterionic and amphoteric surfactants and mixtures thereof;

(c) optionally, from about 0 01% to about 5% by weight of cationic polymeric skin conditioning agent; and

(d) water

wherein the polar oil has an average carbon chain length of from about 10 to about 18 carbon atoms and wherein the water-soluble surfactants have an average carbon chain length of from about 10 to about 18 carbon atoms

2 A composition according to Claim 1 wherein the total level of the thickening system is from about 0 01% to about 10%, preferably from about 0 05% to about 8%, more preferably from about 0 1%% to about 4%, most preferably from about 0 1% to about 2%, especially from about 0 5% to 1 5% by weight

3 A composition according to Claim 1 or 2 wherein the ratio of associative polymer to polar oil is in the range of from about 1 5 to about 5 1, more preferably from about 1 3 to about 3 1, most preferably from about 1 2 to about 1 2

4 A composition according to any of Claims 1 to 3 wherein associative polymer is present at a level of from about 0 01% to about 12%, preferably from about 0 01% to about 10%, more preferably from about 0 05% to about 8%, most preferably from about 0 1% to about 4%, especially from about 0 1% to about 2% and most especially from about 0 5% to about 1 5% by weight

5 A composition according to any of Claims 1 to 4 wherein the associative polymer has an average molecular weight in the range of from about 2,000 to about 2,000,000, preferably from about 10,000 to about 1,000,000, more preferably from about 20,000 to about 800,000

6 A composition according to any of Claims 1 to 5 wherein the associative polymer is a hydrophobically modified water-soluble nonionic polymer selected from hydrophobically modified hydroxyalkyl cellulose polymers, hydrophobically modified alkoxylated urethane polymers, hydrophobically modified nonionic polyols and mixtures thereof

7 A composition according to any of Claims 1 to 6 wherein the polar oil is present at a level of from about 0 01% to about 3%, preferably from about 0 01% to about 2%, more preferably from about 0 1% to about 1%, most preferably from about 0 2% to about 0 8% by weight

8 A composition according to any of Claims 1 to 7 wherein the polar oil is selected from primary amines such as cocamine and alkanolamides such as cocamide MEA, PEG-3 cocamide, lauramide MEA, lauramide MIPA, lauramide DEA, cocamide DEA and mixtures thereof

9 A composition according to any of Claims 1 to 8 wherein the polar oil has an average carbon chain length which is in the range of from about 10 to about 18, preferably from about 12 to about 16 and especially from about 12 to about 14 carbon atoms

US005714446A

United States Patent [19]

Bartz et al.

[11] Patent Number: 5,714,446

[45] Date of Patent: Feb. 3, 1998

[54] **SHAMPOO COMPOSITIONS WITH SILICONE AND CATIONIC SURFACTANT CONDITIONING AGENTS**

[75] Inventors. Lisa Jo Bartz; James David Landgrebe; Robert Lee Wells, all of Cincinnati, Ohio

[73] Assignee. The Procter & Gamble Company, Cincinnati, Ohio

[21] Appl. No. 385,228

[22] Filed: Feb. 8, 1995

Related U.S. Application Data

[63] Continuation of Ser. No. 280,619, Jun. 16, 1994, abandoned, which is a continuation of Ser. No. 74,700, Jun. 10, 1993, abandoned, which is a continuation of Ser. No. 852,363, Mar. 13, 1992, abandoned, which is a continuation of Ser. No. 622,705, Jan. 25, 1990, abandoned.

[51] Int. Cl.[6] C11D 1/86; C11D 9/36; C11D 1/62, C11D 1/12

[52] U.S. Cl. 510/119; 510/122, 510/123, 510/124; 510/125, 510/126; 510/127, 510/502, 510/499; 510/501, 510/504, 510/466

[58] Field of Search 252/547 174.15, 252/DIG 13, 510/122, 123, 124, 125 126, 127 499, 501, 502, 504, 466

[56] References Cited

U.S. PATENT DOCUMENTS

2,826,551	3/1958	Geen	252/89
3,929,678	12/1975	Laughlin et al.	252/526
3,964,500	6/1976	Drakoff	132/7
3,969,500	7/1976	Kennedy	424/10
3,990,991	11/1976	Gaetani	252/542
4,009,256	2/1977	Nowak et al.	424/70
4,220,168	9/1980	Newell	132/7
4,264,457	4/1981	Basko et al.	252/8.75
4,330,526	5/1982	Watanabe et al.	424/70
4,364,837	12/1982	Pader	252/173
4,374,125	2/1983	Newell	424/70
4,529,586	7/1985	DeMarco et al.	424/70
4,576,729	3/1986	Panek et al.	252/106
4,597,902	7/1986	Gruller et al.	424/47
4,673,568	6/1987	Gruller et al.	424/47
4,704,272	11/1987	Oh et al.	424/70
4,707,293	11/1987	Fuzo	252/174.17
4,710,314	12/1987	Madrange et al.	252/117
4,726,944	2/1988	Ozgow et al.	424/70
4,728,457	3/1988	Fieler et al.	252/174.15
4,741,855	5/1988	Grote et al.	252/142
4,749,565	6/1988	Gruller	424/70
4,788,006	11/1988	Bolich et al.	252/550
4,842,850	6/1989	Vu	424/70
4,859,456	8/1989	Mausner	424/47
4,902,499	2/1990	Bolich et al.	424/70
4,906,459	3/1990	Cobb et al.	424/70
4,983,383	1/1991	Maitreyi	424/70
5,018,990	5/1991	Martin et al.	424/70
5,085,857	2/1992	Reed et al.	424/70

FOREIGN PATENT DOCUMENTS

0 413 416	2/1991	European Pat. Off.
0 413 417	2/1991	European Pat. Off.
0 432 951 A2	6/1991	European Pat. Off.
54-129135	10/1979	Japan
56-72095	6/1981	Japan
2262-906-A	3/1989	Japan
2262507-A	3/1989	Japan
327266	7/1989	Japan
2042008	2/1990	Japan
2188518	7/1990	Japan
2188519	7/1990	Japan
849433	9/1960	United Kingdom

OTHER PUBLICATIONS

McCutcheons's *Emulsifiers & Detergents*, 1981 International Edition. pp. 55 and 157

Cuellas, J., Cuenllas, F., Leal, J.S., Para, J.L. and Angueira, S. "Anionic and Cationic Compounds in Mixed Systems" *Cosmetics & Toiletries*, vol. 106, Apr. 1991, pp. 49–54.

Burgess, D. J. "Practical Analysis of Complex Coacervate Systems, *J Colloid and Interface Science*" vol. 140, No. 1 Nov. 1990. pp. 227–228.

vonOss, C.J. "Coacervation, Complex-Coacervation and Flocculation" *J Dispersion Science and Technology*, vol. 9 (Nos. 5 and 6), 1988–1989, pp. 561–573 Amerchol Corp. pamphlet Glucam®.

McCutcheon's functional Materials 1990. McCutcheon Publishing Co., Glen Rock, NJ pp. 48, 69.

Hardman and Jorkuloon, General Electric Co., "Silicones" reprinted from Encg. of Polymer Science & Engineering, vol. 15 2nd Ed., 1989 J Wiley & Sons, Inc., pp. 265–270.

Primary Examiner—Douglas J McGinty
Assistant Examiner—Charles Boyer
Attorney, Agent, or Firm—Leonard W Lewis; Loretta J. Henderson, David K. Dabbiere

[57] ABSTRACT

Disclosed are hair conditioning shampoo compositions comprising

(a) from about 5% to about 50%, by weight, of an anionic surfactant component,

(b) from about 0.1% to about 10%, by weight, of a dispersed, insoluble, nonionic silicone hair conditioning agent, said silicone hair conditioning agent comprising a non-volatile, insoluble, nonionic silicone fluid component,

(c) from about 0.2% to about 10%, by weight, of a soluble cationic, amino or quaternary ammonium conditioning surfactant having a cationic nitrogen atom and at least one N-radical containing one or more hydrophilic moieties that are within 4 carbon atoms (inclusive) of a cationic nitrogen, said hydrophilic moieties being selected from the group consisting of alkoxy polyoxyalkylene, alkylamido, hydroxyalkyl, and alkyl ester moieties, and combinations thereof; and

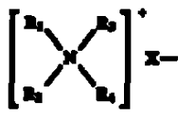
(d) an aqueous carrier.

The shampoo compositions hereof can provide excellent overall hair conditioning benefits, in conjunction with excellent cleaning performance, to a variety of hair types including treated hair such as permed and color-treated hair as well as undamaged hair.

32 Claims, No Drawings

more nonionic hydrophilic moieties selected from alkoxy, polyoxyalkylene, alkylamido, hydroxyalkyl, and alkylester moieties, and combinations thereof. The surfactant contains at least one hydrophilic moiety within 4 (inclusive), preferably within 3 (inclusive), carbon atoms of the quaternary nitrogen or cationic amino nitrogen. For purposes herein, this means that the closest non-carbon atom in the hydrophilic moiety to the cationic nitrogen must be within the stated number of carbon atoms relative to said nitrogen. Additionally, carbon atoms that are part of a hydrophilic moiety, e.g., carbon atoms in a hydrophilic polyoxyalkylene (e.g.,—CH_2—CH_2—O—), that are adjacent to other hydrophilic moieties are not counted as when determining the number of hydrophilic moieties within 4, or preferably 3, carbon atoms of the cationic nitrogen. In general, the alkyl portion of any hydrophilic moiety is preferably a C_1–C_3 alkyl. Suitable hydrophilic-containing radicals include, for example ethoxy propoxy polyoxyethylene polyoxypropylene ethylamido propylamido hydroxymethyl, hydroxyethyl, hydroxypropyl, methylester ethylester, propylester, or mixtures thereof, as nonionic hydrophilic moieties. The amino surfactants must be positively charged at the pH of the shampoo compositions. Generally the pH of the shampoo compositions will be less than about 10, typically from about 3 to about 9, preferably from about 4 to about 8. Additionally, it is preferred that the charge density be within the above limits at the pH of intended use which will, in general, be from about pH 4 to about pH 9 most preferably from about pH 5 to about pH 8. The polymer of course, must remain cationic upon application to the hair in order for there to be adequate substantivity between the conditioning agent and the hair.

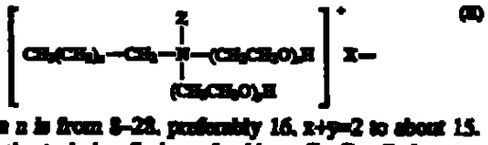
Among the quaternary ammonium cationic surfactants useful herein are those of the general formula



(I)

wherein R_1, R_2, R_3 and R_4 radicals comprise, independently, substituted or unsubstituted hydrocarbyl chains of from 1 to about 30 carbon atoms, or a hydrocarbyl having from 1 to about 30 carbon atoms and containing one or more aromatic, ether, ester, amido, or amino moieties present as substituents or as linkages in the radical chain, wherein at least one of the R_1–R_4 radicals contains one or more hydrophilic moieties selected from alkoxy (preferably C_1–C_3 alkoxy), polyoxyalkylene (preferably C_1–C_3 polyoxyalkylene), alkylamido, hydroxyalkyl, alkylester, and combinations thereof. Preferably, the cationic conditioning surfactant contains from 2 to about 10 nonionic hydrophilic moieties located within the above stated ranges. For purposes herein, each hydrophilic amido, alkoxy, hydroxyalkyl, alkylester, alkylamido or other unit is considered to be a distinct nonionic hydrophilic moiety. X is a soluble salt forming anion preferably selected from halogen (especially chlorine), acetate, phosphate, nitrate, sulfonate, and alkyl sulfate radicals.

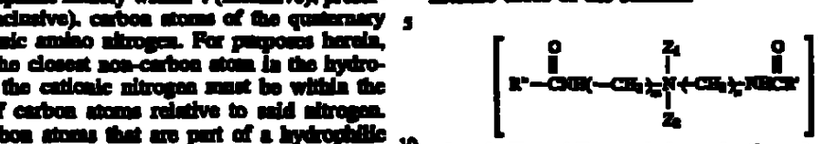
Preferred quaternary ammonium salt surfactants include those of the formula



(II)

wherein n is from 8–28, preferably 16, x+y=2 to about 15. Z is a short chain alkyl, preferably a C_1–C_3 alkyl, more preferably methyl, and X is a water soluble salt forming anion (e.g., Cl, sulfate, etc.)

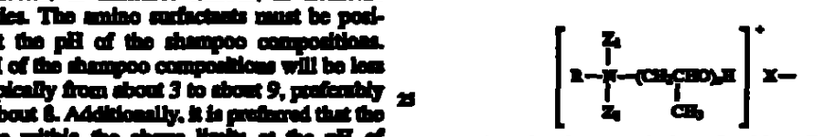
Other preferred quaternary ammonium salt surfactants include those of the formula



(III)

wherein Z_1 and Z_2 are, independently, substituted or unsubstituted hydrocarbyls, and, preferably, Z_1 is an alkyl, preferably a C_1–C_3 alkyl, more preferably methyl, and Z_2 is a short chain hydroxyalkyl, preferably hydroxymethyl or hydroxyethyl, n and m independently are integers from 2 to 4, inclusive, preferably from 2 to 3 inclusive, more preferably 2, R' and R" independently, are substituted or unsubstituted hydrocarbyls, preferably C_{12}–C_{20} alkyl or alkenyl, and X is a soluble salt-forming anion (e.g., sulfate Cl, etc.).

Still other quaternary ammonium salt surfactants are of the formulas

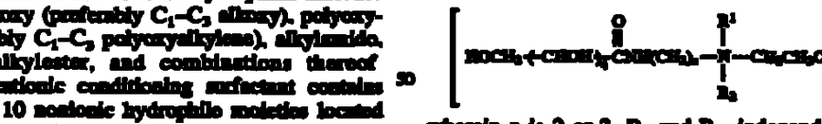


(IV)

wherein R is a hydrocarbyl, preferably a C_1–C_3 alkyl, more preferably ethyl, Z_1 and Z_2 are, independently, short chain hydrocarbyls, preferably C_2–C_4 alkyl or alkenyl, more preferably ethyl, a is from about 2 to about 40, preferably from about 7 to about 30, and X is a soluble salt-forming anion, as set forth previously;

(V)

wherein R_1 and R_2 , independently are C_{12}–C_{20} hydrocarbyls, preferably C_{16}–C_{18} alkyl or alkenyls (e.g. those derived from tallow acid), Z is a C_1–C_3 hydrocarbyl, preferably ethyl, n is 2 or 3 and X is a soluble salt forming anion, and



(VI)

wherein n is 2 or 3, R_1 and R_2, independently are C_1–C_3 hydrocarbyls preferably ethyl, and X is as defined above.

Specific examples of preferred quaternary ammonium salts include polyoxyethylene (2) stearyl ethyl ammonium chloride, methyl bis (hydrogenated tallowamidoethyl) 2-hydroxyethyl ammonium methyl sulfate, polyoxypropylene (9) diethyl methyl ammonium chloride, tripolyoxyethylene (total PEG=10) stearyl ammonium phosphate, bis(N-hydroxyethyl-2-oleyl imidazolinium chloride) polyethylene glycol (12), and isododecylbenzyl triethanolammonium chloride.

Other ammonium quaternary and amino surfactants include those of the above general formula I in the form of ring structures formed by covalently linking of the radicals. Examples of such cationic surfactants include imidazolines, imidazoliniums, and pyridiniums, etc., wherein said surfac-

tant has at least one anionic hydrophile-containing radical as set forth above. Specific examples include 2-heptadecyl-4,5-dihydro-1H-imidazol-1 ethanol, 4,5-dihydro-1-(2-hydroxyethyl)-2-isoheptadecyl-1-phenylmethylimidazolium chloride, and 1 [2-oxo-2-[[2-[(1-oxooctadecyl)oxy]ethyl]amino]ethyl] pyridinium chloride. See also, for example formula V

Salts of primary secondary and tertiary fatty amines are also preferred cationic surfactant materials. The alkyl groups of such amines preferably have from about 1 to about 30 carbon atoms and must contain at least one, preferably 2 to about 10, anionic hydrophilic moieties selected from alkoxy polyoxyalkylene, alkylamido, hydroxyalkyl, and alkylester moieties, and mixtures thereof. Secondary and tertiary amines are preferred, tertiary amines are particularly preferred. Specific examples of suitable amines include diethyl aminoethyl polyoxyethylene (5) laurate, cocopolyglyceryl-4 hydroxypropyl dihydroxy ethylamine, and dihydroxyethyl tallowamine hydrochloride.

The cationic conditioning agents for use herein may also include a plurality of ammonium quaternary moieties or amino moieties, or a mixture thereof.

Aqueous Carrier

The shampoo compositions of the present invention are liquids which, preferably, and are pourable at room temperature. The compositions hereof will comprise an aqueous carrier, i.e., water which will generally be present at a level of about 20% to about 95% by weight of the composition, preferably from about 60% to about 85% for pourable, liquid formulations. The compositions of the present invention can also be in other forms such as gels, mousses, etc. In such cases, appropriate components known in the art such as gelling agents (e.g., hydroxyethyl cellulose), etc. can be included in the compositions. Gels will typically contain from about 20% to about 90% water. Mousses will contain aerosol propellant in a low viscosity composition and are packaged in an aerosol can, according to techniques well know in the art.

Suspending Agent for Silicone Conditioning Agent

Since the silicone conditioning agent used in the present compositions is an insoluble silicone dispersed in the compositions, it is preferred to utilize a suspending agent for the silicone. Suitable suspending agents are long chain acyl derivatives, long chain amine oxides, and mixtures thereof wherein such suspending agents are present in the shampoo compositions in crystalline form. A variety of such suspending agents are described in U.S. Pat. No. 4,741,855, Grote et al., issued May 3 1988 Especially preferred is ethylene glycol distearate.

Also included among the long chain acyl derivatives useful as suspending agents are the N,N-di(hydrogenated) C_{16}-C_{18} amido benzoic acid, or soluble salt (e.g., K, Na salts) thereof particularly N,N-di(hydrogenated)tallow amido benzoic acid which is commercially marketed by Stepan Company (Northfield, Ill., USA).

Another useful suspending agent for the silicone conditioning agents of the present compositions is xanthan gum as described in U.S. Pat. No. 4,788,006, Bolich et al., issued Nov 29, 1988. The combination of long chain acyl derivatives and xanthan gum as a suspending system for silicone is described in U.S. Pat. No. 4,704,272, Oh et al., issued Nov. 3 1987 and may also be used in the present compositions.

Generally, the shampoo compositions will comprise from about 0.1% to about 5.0%, preferably from about 0.5% to about 3.0%, of the suspending agent to suspend the silicone conditioning agent.

Optional Components

The present compositions may also comprise a variety of non-essential, optional shampoo components suitable for rendering such compositions more cosmetically or aesthetically acceptable or to provide them with additional usage benefits. A variety of such ingredients are well-known to those skilled in the art, and these include without limiting the invention thereto: pearlescent aids, such as TiO_2 coated mica, ethylene glycol distearate, opacifiers, preservatives, such as benzyl alcohol, 1,3-bis(hydroxymethyl)-5 5 dimethyl-2,4-imidazolidinedione (e.g. Glydant®, Glyco, Inc., Greenwich, Conn. USA), methylchloroisothiazolinone (e.g. Kathon® Rohm & Haas Co., Philadelphia, Pa., USA), methyl paraben, propyl paraben, and imidazolidinyl urea, fatty alcohols, such as cetearyl alcohol, cetyl alcohol, and stearyl alcohol, sodium chloride; sodium sulfate; ethyl alcohol, pH adjusting aids, such as citric acid, sodium citrate, succinic acid, phosphoric acid, monosodium phosphate, disodium phosphate, sodium hydroxide, and sodium carbonate, coloring agents or dyes, perfumes, and sequestering agents, such as disodium ethylenediamine tetra-acetate.

Another optional ingredient that can be advantageously used is an anti-static agent. The anti-static agent should not unduly interfere with the in-use performance and end-benefits of the shampoo; particularly the anti-static agent should not interfere with (i.e., it should be compatible with) the anionic detersive surfactant. An especially suitable anti-static agent is tricetyl methyl ammonium salt (e.g. the chloride salt, "TCMAC").

Preferred compositions herein comprise anionic surfactant, silicone conditioning agent, TCMAC (or other salt thereof), and soluble cationic conditioning surfactant selected from the compounds of Formula III, above, especially the preferred embodiments of Formula III. Surprisingly, such compositions can exhibit enhanced silicone conditioning agent deposition relative to similar compositions absent the soluble cationic conditioning surfactant.

Typically, from about 0.1% to about 5% of such anti-static agent is incorporated into the shampoo compositions when they are to be utilized.

Though the silicone suspending agent component may act to thicken the present compositions to some degree, the present compositions may also optionally contain other thickeners and viscosity modifiers such as an ethanolamide of a long chain fatty acid (e.g., polyethylene (3) glycol lauramide and coconut monoethanolamide).

These optional components generally are used individually in the compositions of the present invention at a level of from about 0.01% to about 10%, preferably from about 0.05% to about 5.0% of the shampoo composition.

The pH of the present compositions will generally be in the range of from about 2 to about 10, preferably from about 3 to about 9.

Method of Manufacture

The compositions of the present invention, in general, can be made by mixing the materials together at elevated temperature, e.g. about 72° C. The silicone resin, if any, and silicone fluid component are first mixed together before being mixed with the other ingredients. The complete mixture is mixed thoroughly at the elevated temperature and is then pumped through a high shear mill and then through a heat exchanger to cool it to ambient temperature. The average particle size of the silicone is preferably from about 0.5 microns to about 20 microns. Alternately, the silicone conditioning agent can be mixed with anionic surfactant and fatty alcohol, such as cetyl and stearyl alcohols, at elevated temperature, to form a premix containing dispersed silicone.

The premix can then be added to and mixed with the remaining materials of the shampoo, pumped through a high shear mill, and cooled.

Method of Use

The shampoo compositions of the present invention are utilized conventionally, i.e. the hair is shampooed by applying an effective amount of the shampoo composition to the scalp, and then rinsing it out. Application of the shampoo to the scalp in general, encompasses massaging or working the shampoo in the hair such that all or most of the hair on the scalp is contacted. The term an "effective amount" as used herein, is an amount which is effective in cleaning and conditioning the hair. Generally, from about 1 g to about 20 g of the composition is applied for cleaning and conditioning the hair

EXAMPLES

The following examples illustrate the present invention. It will be appreciated that other modifications of the present invention within the skill of those in the hair care formulation art can be undertaken without departing from the spirit and scope of this invention.

All parts, percentages, and ratios herein are by weight unless otherwise specified. Some components may come from suppliers as solutions. The levels given reflect the active weight percent of such materials unless otherwise specifically indicated.

Example I

The following is a shampoo composition of the present invention

Component	Weight %
Ammonium Lauryl Sulfate	13.5
Ammonium Laureth (3) Sulfate	4.0
Methyl bis(hydrogenated tallow amidoethyl) 2-hydroxyethyl ammonium methyl sulfate *	1.5
Coconut Monoethanol Amide	1.0
Ethylene Glycol Distearate	1.5
Ammonium Xylene Sulfonate	1.0
Xanthan Gum	0.5
Polydimethylsiloxane **	3.0
Cetyl Alcohol	0.4
Stearyl Alcohol	0.2
Perfume	1.2
Color Solution	0.6
Preservative	0.2
Water and Minor	– to 100% –

* Available under the tradename VARISOFT 110 from Sherex Chemical Co. (Dublin, Ohio, USA)
** A 40/60 weight ratio blend of polydimethylsiloxane gum (GE SE76, General Electric Co., Silicone Products Div., Waterford, NY, USA) and a polydimethylsiloxane fluid (about 350 centistokes).

The composition can provide excellent in-use hair cleaning and conditioning, for both damaged and undamaged, hair types.

Example II

The following is an example of a shampoo composition of the present invention.

Component	Weight %
Ammonium Lauryl Sulfate	13.0
Ammonium Laureth (3) Sulfate	5.0
Polyoxyethylene (2) stearyl methyl ammonium chloride *	1.0
Coconut Monoethanol Amide	1.5
Ethylene Glycol Distearate	2.0
Ammonium Xylene Sulfonate	1.0
Polydimethylsiloxane **	2.5
Cetyl Alcohol	0.4
Stearyl Alcohol	0.2
Perfume	1.2
Color Solution	0.6
Preservative	0.2
Water and Minor	– to 100% –

* Available under the tradename KEMQUAD 18/12 from Arnak Company (McCook, Illinois, USA).
** A 40/60 weight ratio blend of polydimethylsiloxane gum (GE SE76, General Electric Co., Silicone Products Div., Waterford, NY, USA) and a polydimethylsiloxane fluid (about 350 centistokes).

The composition can provide excellent in-use hair cleaning and conditioning, for both damaged and undamaged, hair types.

Example III

The following is an example of a shampoo composition of the present invention.

Component	Weight %
Ammonium Lauryl Sulfate	13.5
Ammonium Laureth (3) Sulfate	4.0
Polyoxyethylene (2) stearyl methyl ammonium chloride *	1.5
Coconut Monoethanol Amide	1.5
Ethylene Glycol Distearate	2.0
Triacetylhexylcitrate	0.1
Polydimethylsiloxane **	2.0
Cetyl Alcohol	0.4
Stearyl Alcohol	0.2
Perfume	1.2
Color Solution	0.6
Preservative	0.2
Water and Minor	– to 100% –

* Available under the tradename KEMQUAD 18/12 from Arnak Company (McCook, Illinois, USA).
** A 40/60 weight ratio blend of polydimethylsiloxane gum (GE SE76, General Electric Co., Silicone Products Div., Waterford, NY, USA) and a polydimethylsiloxane fluid (about 350 centistokes).

The composition can provide excellent in-use hair cleaning and conditioning, for both damaged and undamaged, hair types.

Example IV

The following is an example of a shampoo composition of the present invention.

Component	Weight %
Ammonium Lauryl Sulfate	4.0
Cocoamidopropyl Betaine	2.5
Ammonium Laureth (3) Sulfate	9.0
Sodium N-Lauryl β-Iminodipropionate	4.0
Methyl bis (hydrogenated tallow amidoethyl) 2-hydroxyethyl ammonium methyl sulfate *	1.0
Coconut Monoethanol Amide	2.0
Ethylene Glycol Distearate	2.0
Xanthan Gum	0.5
Polydimethylsiloxane **	2.0
Cetyl Alcohol	0.4

-continued

Component	Weight %
Stearyl Alcohol	0.2
Perfume	1.2
Color Solution	0.6
Preservative	0.2
Water and Minors	-- to 100% --

* Available under the tradename VARISOFT 110 from Sherex Chemical Co. (Dublin, Ohio, USA)
** A 40/60 weight ratio blend of polydimethylsiloxane gum (GE SE76, General Electric Co., Silicone Products Div., Waterford, NY, USA) and a polydimethylsiloxane fluid (about 350 centistoke).

The composition can provide excellent in-use hair cleaning and conditioning, for both damaged and undamaged hair types.

Example V

The following is a shampoo composition of the present invention.

Component	Weight %
Ammonium Lauryl Sulfate	8.5
Ammonium Laureth (3) Sulfate	8.5
Methyl bis(hydrogenated tallow amidoethyl) 2-hydroxyethyl ammonium methyl sulfate *	2.0
Coconut Monoethanol Amide	1.5
Ethylene Glycol Distearate	2.0
Ammonium Xylene Sulfonate	1.5
Trisoyl Methyl Ammonium Chloride	.5
Polydimethylsiloxane Fluid **	1.4
MQ Silicone Resin/Volatile Cyclomethicone ***	1
Cetyl Alcohol	.4
Stearyl Alcohol	.2
Perfume	1.0
Color Solution	.6
Preservative	.08
Water and Minors	-- to 100% --

* Available under the tradename VARISOFT 110 from Sherex Chemical Co. (Dublin, Ohio, USA)
** A 40/60 weight ratio blend of polydimethylsiloxane gum (GE SE76, General Electric Co., Silicone Products Div., Waterford, NY, USA) and a polydimethylsiloxane fluid (about 350 centistoke).
*** A 65:45 weight ratio blend of the MQ resin in volatile silicone carrier. M:Q molar ratio of about 0.8:1.0.

The composition can provide excellent in-use hair cleaning and conditioning, for both damaged and undamaged hair types.

The compositions hereof can be made by preparing a premix of the entire amount of silicone conditioning agent (i.e. the silicone fluid component and, if any the silicone resin) to be incorporated into the shampoo, along with sufficient ammonium laureth sulfate and cetyl and stearyl alcohol such that the premix comprises about 30% silicone conditioning agent, about 69% surfactant, and about 1% of the alcohols. The premix ingredients are heated and stirred at 72° C. for about 10 minutes and the premix is then conventionally mixed with the remaining hot ingredients. The composition is then pumped through a high shear mixer and cooled.

What is claimed is.

1. A liquid hair conditioning shampoo composition comprising

(a) from about 5% to about 50% by weight, of an anionic surfactant component selected from the group consisting of

(i) alkyl sulfates,

(ii) ethoxylated alkyl sulfates,

(iii) succinamates,

(iv) olefin sulfates having about 12 to about 24 carbons;

(v) β-alkyloxy alkane sulfonates,

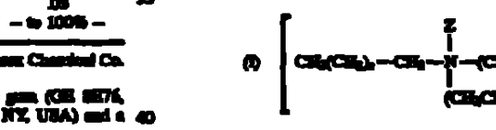
(vi) reaction products of fatty acids esterified with isethionic acid and neutralized with sodium hydroxide;

(vii) R_1—SO_3—M water-soluble salts wherein R_1 is a saturated aliphatic hydrocarbon radical having from about 8 to about 24, carbon atoms and M is a cation, and

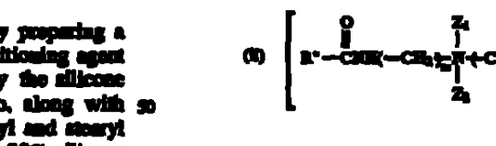
(viii) mixtures thereof;

(b) from about 0.1% to about 10%, by weight, of a dispersed, insoluble, nonionic silicone hair conditioning agent comprising a non-volatile, insoluble, nonionic silicone fluid component and a silicone resin component supplied in a nonvolatile silicone fluid, wherein the weight ratio of the nonvolatile silicone fluid component to the silicone resin component is from about 19:1 to about 400:1,

(c) from about 0.2% to about 10%, by weight, of a soluble cationic, amino or quaternary ammonium conditioning surfactant having a cationic nitrogen atom and at least one N-radical containing one or more hydrophilic moieties that are within 4 carbon atoms, inclusive, of a cationic nitrogen, said hydrophilic moieties being selected from the group consisting of alkoxy, polyoxyalkylene, alkylamido, hydroxyalkyl, and alkylester moieties, and combinations thereof, wherein said soluble, cationic conditioning surfactant is selected from the group consisting of

(i) 

wherein n is from 8–28 x+y=2 to about 15, Z is a C_1–C_3 alkyl, and X is a water soluble salt forming anion,

(ii) 

wherein Z_2 is a C_1–C_3 alkyl, Z_3 is a C_1–C_3 hydroxy alkyl, n and m independently are integers from 2 to 4, inclusive, R' and R" independently are substituted or unsubstituted hydrocarbyls, and X is a soluble salt-forming anion;

(iii) 

wherein R is a C_1–C_3 alkyl, Z_1 and Z_2 are independently C_2–C_4 alkyl or alkenyl, a is from about 2 to about 40, and X is a soluble-salt forming anion.

100

102

SUPERINTENDENCIA DE INDUSTRIA Y COMERCI

DIVISION DE NUEVAS CREACIONES

2020
Bogotá, D C , Agosto 23 de 2006

Abogada
JIMENA ESCOBAR URIBE

ASUNTO	Radicación No	01 067 832
	Trámite	002
	Evento	001
	Actuación	430
	Oficio No	09786
	Folios	0

Como resultado del examen de patentabilidad de la solicitud de patente de invención, realizado según lo establece el artículo 45 de la Decisión 486 de la Comisión de la Comunidad Andina, se notifica el siguiente concepto técnico

Título de la solicitud "Composiciones limpiadoras, viscosas, suaves y efectivas"

1 Documentos estudiados

Para el presente estudio se tuvieron en cuenta el capítulo descriptivo comprendido en los folios 4 - 25 y el capítulo reivindicatorio de los folios 26 – 32 de la solicitud

2 Objeto de la invención

El objeto de la presente solicitud de patente de invención consiste en

Las reivindicaciones 1 – 16 se refieren a una composición que contiene

(a) un compuesto de Fórmula (I) $R\text{-}CO\text{-}NH\text{-}[CH_2\text{-}CH_2\text{-}O]_n\text{-}[CH_2\text{-}\underset{\displaystyle CH_3}{\underset{|}{CH}}\text{-}O]_m\text{-}OH$
(b) un agente activo de superficie aniónico, y, opcionalmente,
(c) un agente activo de superficie no iónico, anfótero, betaina, catiónico o sus mezclas

El problema planteado en esta solicitud es la necesidad de una composición limpiadora que sea suave para la piel y los ojos, con adecuadas viscosidad y capacidad de formación de espuma, tal como champús, lavados, geles, baños, cosméticos, lociones, cremas

Para resolver este problema técnico la solicitud en estudio proporciona una composición que contiene un compuesto de Fórmula (I), un agente activo de superficie aniónico, y, opcionalmente, un agente activo de superficie no iónico, anfótero, botaina, catiónico o sus mezclas

El objeto de la invención definido anteriormente se clasificó de acuerdo con la IPC A 61 K 7/50

También se reivindica prioridad de la Solicitud de Patente de los Estados Unidos US 09 641 644 de agosto 18 de 2000, con respecto a la cual la fecha de presentación de la actual solicitud cumple el plazo máximo permitido

3 Determinación del Estado de la Técnica

El artículo 16 de la decisión 486 de la comisión de la Comunidad Andina que establece que "*El estado de la técnica comprenderá todo lo que haya sido accesible al publico 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*

Solo 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"

Considerando que la fecha de presentación de la primera solicitud de patente de la cual se reivindica prioridad es agosto 18 de 2000, se consultaron las bases de datos y los archivos con que cuenta la entidad con fecha de publicación anterior y se encontraron los siguientes documentos que anticipan el objeto de esta solicitud

No	Documento	Título	Fecha de Publicación
D1	WO 98 00494	CLEANSING COMPOSITIONS	Enero 8, 1998
D2	US 5 714 446	Shampoo compositions with silicone and cationic surfactant conditioning agents	Feb 3, 1998

4. Evaluación de los requisitos de Patentabilidad

El artículo 14 de la Decisión 486 de la Comisión de la Comunidad Andina establece que "*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 del artículo 14 de la Decisión 486, se procedió a evaluar el cumplimiento de 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 Art. 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

Solo 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

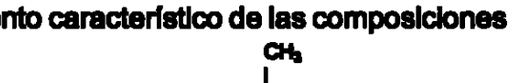
oficina nacional competente, cuya fecha de presentación o de prioridad fuese anterior a la fecha de presentación o de prioridad de la solicitud de patente que se estuviese examinando, siempre que dicho contenido esté incluido en la solicitud de fecha anterior cuando ella se publique o hubiese transcurrido el plazo previsto en el Art 40"

Las reivindicaciones 1 – 16 se refieren a una composición que contiene

- un compuesto de Fórmula (I) 
- un agente activo de superficie aniónico, y, opcionalmente,
- un agente activo de superficie no iónico, anfótero, betaina, catiónico o sus mezclas

D1 enseña una composición limpiadora que contiene
- una alcanolamida con cadena de 10 – 18 carbonos (p ej cocoamida de PEG, lauramida de MEA),
- un agente activo de superficie aniónico, y opcionalmente,
- un agente activo de superficie no iónico, anfótero, betaina, acondicionador catiónico o sus mezclas

D2 enseña composición limpiadora que contiene
- una alcanolamida (p ej cocoamida de PEG, cocoamida de MEA),
- un agente activo de superficie aniónico, y opcionalmente,
- un agente activo de superficie no iónico, anfótero, betaina, acondicionador catiónico o sus mezclas

Se observa que el elemento característico de las composiciones reivindicadas, es decir alcanolamida  , ya era conocido en D1 y D2, por lo cual las composiciones de las reivindicaciones 1 – 16 no pueden considerarse nuevas

Evaluación del Nivel Inventivo

El artículo 18 de la Decisión 486 de la Comisión de la Comunidad Andina establece que *Se considerará que una invención tiene nivel inventivo, si para una persona del oficio normalmente versada en la materia técnica correspondiente, esa invención no hubiese resultado obvia ni se hubiese derivado de manera evidente del estado de la técnica*

Las reivindicaciones 1 – 16 se refieren a una composición que contiene

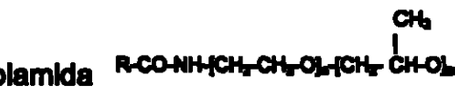
- un compuesto de Fórmula (I) 
- un agente activo de superficie aniónico, y, opcionalmente,
- un agente activo de superficie no iónico, anfótero, betaina, catiónico o sus mezclas

D1 enseña una composición limpiadora que contiene
- una alcanolamida con cadena de 10 – 18 carbonos (p ej cocoamida de PEG, lauramida de MEA),
- un agente activo de superficie aniónico, y opcionalmente,
- un agente activo de superficie no iónico, anfótero, betaina, acondicionador catiónico o sus mezclas

D2 enseña composición limpiadora que contiene
- una alcanolamida (p ej cocoamida de PEG, cocoamida de MEA),

- un agente activo de superficie aniónico, y opcionalmente,
- un agente activo de superficie no iónico, anfótero, betaina, acondicionador catiónico o sus mezclas

Se observa que

(a) debido a que la alcanolamida  , era conocida en las anterioridades, una persona de habilidades ordinarias en el arte adaptará fácilmente este compuesto y un agente activo de superficie aniónico y opcionalmente uno no iónico, anfótero, betaina, catiónico o sus mezclas a la preparación de una composición como la de esta solicitud,

(b) las reivindicaciones de esta solicitud no mencionan una característica que conceda un efecto diferente o especial a la composición objeto de esta solicitud que pueda considerarse como un aporte a la técnica, así que son obvios para una persona versada en la materia,

(c) el problema planteado en esta solicitud que era la necesidad de una composición limpiadora que sea suave para la piel y los ojos, con adecuadas viscosidad y capacidad de formación de espuma, tal como champús, lavados, geles, baños, cosméticos, lociones, cremas se resuelve proporcionando una composición que contiene un compuesto de Fórmula (I), un agente activo de superficie aniónico, y, opcionalmente, un agente activo de superficie no iónico, anfótero, betaina, catiónico o sus mezclas, es decir de la misma manera como se resolvía en las anterioridades,

(d) el resultado obtenido es decir la composición que contiene un compuesto de Fórmula (I), un agente activo de superficie aniónico, y, opcionalmente, un agente activo de superficie no iónico, anfótero, betaina, catiónico o sus mezclas no es inesperado

(e) no parece haberse superado un prejuicio técnico anterior, con la composición que contiene un compuesto de Fórmula (I), un agente activo de superficie aniónico, y, opcionalmente, un agente activo de superficie no iónico, anfótero, betaina, catiónico o sus mezclas propuesta

de manera que el objeto reivindicado no tiene **nivel inventivo**

5 Conclusión

En conclusión, los requisitos de patentabilidad de la presente solicitud están afectados así

Item	Documento	Reivindicaciones afectadas	Requisito que afecta
D1	WO 98 00494	1 – 16	Novedad y Nivel Inventivo
D2	US 5 714 446	1 – 16	Novedad y 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 la notificación de la presente comunicación En caso de no dar respuesta al presente requerimiento o si a pesar de la respuesta subsistieran los impedimentos para la concesión, se denegará la patente

Notifíquese el presente oficio conforme a lo dispuesto en el numeral 5 2, literal e), del capítulo quinto del título primero de la Circular Unica No 10 de 2001

ALIX CARMENZA CÉSPEDES DE VERGEL
Jefe de la División de Nuevas Creaciones

El anterior requerimiento fue notificado por fijación en lista, de fecha 31 AGO 2006

CONCEPTO TÉCNICO No 1354	EXAMINADOR TÉCNICO Código 202007