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(54) Title: COSMETIC CONDITIONING COMPOSITION INCLUDING A FIXATIVE

(57) Abstract: Disclosed is a cosmetic composition comprising at least one fixative polymer; at least one plant butter having a hydrocarbon chain distribution C12:30- 55%/C14:10-40%/C16:4-15%; at least one cationic agent, conditioning agent, 5 nonionic surfactant, or mixtures thereof; at least one fatty alcohol; water; optionally at least one emollient, humectant, or a mixture thereof; and optionally a pH adjuster, preservative, or mixture thereof. The invention also related to a cosmetic treatment process, especially for caring for or conditioning hair.



WO 2016/094973 A1

COSMETIC CONDITIONING COMPOSITION INCLUDING A FIXATIVE FIELD OF THE INVENTION

The present invention relates to cosmetic compositions comprising at least one fixative polymer and a vegetable butter. These compositions are particularly useful for providing discipline and control to hair, in particular curly hair, enhancing curl definition and curl retention and/or enhancing shine.

BACKGROUND OF THE INVENTION

Hair styling products often provide a shape, feel and/or color that are not natural, for example such as with the use of film-forming polymers. While there are several products to increase the manageability of hair, the performance of these products is still not optimal, especially for curly and wavy hair. It is thus an object of the invention to provide a cosmetic composition that is easy to apply to hair and affords long lasting manageability, volume control and increased shine without leaving the hair feeling and/or looking unnatural and stiff.

SUMMARY OF THE INVENTION

The present invention is directed to an aqueous cosmetic composition for hair comprising:

- (a) from about 0.1% to about 3%, by weight, of at least one fixative polymer;
 - (b) from about 0.01% to about 20%, by weight, of at least one plant butter having a hydrocarbon chain distribution C12:30-55%/C14:10-40%/C16:4-15%;
 - (c) from about 0.5% to about 6%, by weight, of at least one agent selected from a cationic agent, conditioning agent, nonionic surfactant, and mixtures thereof;
 - (d) from about 0.5% to about 10%, by weight, of at least one fatty alcohol;
 - (e) water; and
 - (f) optionally at least one emollient, humectant or a mixture thereof;
- all weights being relative to the weight of the final composition.

The compositions optionally may also include other components appropriate for its intended use such as oils, antioxidants, preservatives, neutralizers, vitamins and the like.

The invention is also directed to a method of improving the performance a leave-in hair treatment composition comprising adding to said composition a

fixative polymer, in particular PQ-11, and a plant butter.

The present invention is also directed to a method of treating hair with a composition as defined above.

It is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory only, and are not restrictive of the invention.

DETAILED DESCRIPTION OF THE INVENTION

Applicants have found that the addition of at least one fixative polymer and at least one plant butter having a hydrocarbon chain distribution C12:30-55%/C14:10-40%/C16:4-15% to hair serums, conditioners, styling compositions, shots, biphasic compositions and/or monodoses vastly improves the performance of the composition, including providing long lasting manageability, volume control and increased shine of hair without leaving the hair feeling and/or looking unnatural and stiff.

As used herein, the following terms have the following meanings.

“A” and “the” as used herein are understood to encompass the plural as well as the singular.

“About” as used herein means within 10% of the indicated number (e.g. “about 10%” means 9% – 11% and “about 2%” means 1.8% - 2.2%).

“At least one” as used herein means one or more and thus includes individual components as well as mixtures/combinations.

“Conditioning” as used herein means imparting to hair at least one property chosen from compatibility, manageability, moisture-retentivity, luster, shine, and softness. The state of conditioning is evaluated by measuring, and comparing the ease of combing of the treated hair in contrast with the untreated hair.

“Comprising” as used herein is used in the inclusive sense of “having” or “including” and not in the exclusive sense of “consisting only of.”

“Free” or “devoid” of as it is used herein means that while it is preferred that no amount of the specific component be present in the composition, it is possible to have very small amounts of it in the compositions of the invention provided that these amounts do not materially affect at least one, preferably most, of the advantageous properties of the compositions of the invention. Thus, for example, “silicone free” means that silicone is preferably omitted (that is 0% by weight), but can be present in the composition at an amount of less than about 0.25% by weight,

typically less than about 0.1% by weight, typically less than about 0.05% by weight, based on the total weight of the composition as a whole.

INCI" is an abbreviation of International Nomenclature of Cosmetic Ingredients, which is a system of names provided by the International Nomenclature Committee of the Personal Care Products Council to describe personal care ingredients.

"Polymers" as defined herein, include homopolymers and copolymers formed from at least two different types of monomers.

The compositions and methods of the present invention can comprise, consist of, or consist essentially of the essential elements and limitations of the invention described herein, as well as any additional or optional ingredients, components, or limitations described herein or otherwise useful.

Other than in the operating examples, or where otherwise indicated, all numbers expressing quantities of ingredients and/or reaction conditions are to be understood as being modified in all instances by the term "about."

All percentages, parts and ratios herein are based upon the total weight of the compositions of the present invention, unless otherwise indicated.

As used herein, all ranges provided are meant to include every specific range within, and combination of subranges between, the given ranges. Thus, a range from 1-5, includes specifically 1, 2, 3, 4 and 5, as well as subranges such as 2-5, 3-5, 2-3, 2-4, 1-4, etc.

As used herein a range of ratios is meant to include every specific ratio within, and combination of subranges between, the given ranges.

In an embodiment, the present invention is directed to an aqueous cosmetic composition for hair comprising:

(a) from about 0.1% to about 3%, preferably from about 0.15 to about 1.5%, more preferably from about 0.2 to about 0.6%, of at least one fixative polymer;

(b) from about 0.01% to about 20%, typically from about 0.1% to about 3%, most typically from about 0.4% to about 0.7%, by weight, of at least one plant butter having a hydrocarbon chain distribution C12:30-55%/C14:10-40%/C16:4-15%;

(c) from about 0.5% to about 6% of at least one agent selected from a cationic agent, conditioning agent, nonionic surfactant, and mixtures thereof;

(d) from about 0.5% to about 10%, typically from about 1% to about 8%, and more typically from about 2% to about 6%, by weight, of at least one fatty alcohol;

(e) water; and

(f) optionally at least one emollient, humectant or a mixture thereof; all weights being relative to the weight of the final composition.

In a preferred embodiment, the ratio of the fixative polymer to the at least one plant butter, by weight, is from about 1:1 to about 1:10, typically from about 1:1 to about 1:5, including in particular about 1:1 to about 1:3.

In an embodiment the composition includes at least one emollient or humectant, or a mixture thereof.

In an embodiment the composition further includes at least one silicone oil.

Unless otherwise stated, viscosity measurement referred to herein were made with a Rheomat RM 200 instrument (measured at 25°C, 1 atmosphere), spindle M3/30.

In a preferred embodiment, the foregoing cosmetic composition including a fixative polymer and a plant butter have a viscosity from about 15 cP to about 55 cP (centipoises), including all ranges and sub ranges there between. Typically the cosmetic composition has a viscosity from about 20 cP to about 45 cP, including all ranges and sub ranges there between.

In a preferred embodiment the compositions have a pH at 25 °C of from about 4 to about 5.

In a preferred embodiment, the present invention is directed to an aqueous cosmetic composition for hair comprising:

(a) from about 0.1% to about 3%, preferably from about 0.15 to about 1.5%, more preferably from about 0.2 to about 0.6%, of at least one fixative polymer;

(b) from about 0.01% to about 20%, typically from about 0.1% to about 3%, most typically from about 0.4% to about 0.7%, by weight, of at least one plant butter having a hydrocarbon chain distribution C12:30-55%/C14:10-40%/C16:4-15%;

(c) from about 0.5% to about 6% of at least one agent selected from a cationic agent, conditioning agent, nonionic surfactant, and mixtures thereof;

(d) from about 0.5% to about 10%, typically from about 1% to about 8%, and more typically from about 2% to about 6%, by weight, of at least one fatty alcohol;

(e) water;

(f) optionally at least one emollient, humectant or a mixture thereof;

(g) optionally at least one silicone oil; and

(h) from about 0.01 to about 3% of at least one preservative, pH adjuster, or a mixture thereof;

wherein the ratio of the fixative polymer to the at least one plant butter is from about 1:1 to about 1:10; said composition having a viscosity from about 15 cP to about 55 cP; all weights and ratios being relative to the weight of the final composition.

In another embodiment, the present invention is directed to an aqueous cosmetic composition for hair comprising:

(a) from about 0.1% to about 3%, preferably from about 0.15 to about 1.5%, more preferably from about 0.2 to about 0.6%, of at least one fixative polymer;

(b) from about 0.01% to about 20%, typically from about 0.1% to about 3%, most typically from about 0.4% to about 0.7%, by weight, of at least one plant butter having a hydrocarbon chain distribution C12:30-55%/C14:10-40%/C16:4-15%;

(c) from about 0.5% to about 6% of at least one agent selected from a cationic agent, conditioning agent, nonionic surfactant, and mixtures thereof;

(d) from about 0.5% to about 10%, typically from about 1% to about 8%, and more typically from about 3% to about 6%, by weight, of at least one fatty alcohol;

(e) water;

(f) optionally from about 0.05% to about 40%, particularly 0.1% to about 5%, more particularly from about 0.3% to about 1% of at least one emollient, humectant or a mixture thereof;

(g) optionally from about 0.05% to about 3%, typically from about 0.5% to about 1.5%, more typically from about 0.2% to about 1%, of at least one silicone oil; and

(h) from about 0.01 to about 3% of at least one preservative, pH

adjuster, or a mixture thereof;

wherein the ratio of the fixative polymer to the at least one plant butter, by weight, is from about 1:1 to about 1:2.5; said composition having a viscosity from about 20 cP to about 45 cP and a pH at 25 °C of from about 4 to about 5, all weights and ratios being relative to the weight of the final composition.

In an embodiment, the present invention is directed to a method caring for, conditioning, and/or styling hair by the application to the hair a composition comprising:

(a) from about 0.1% to about 3%, preferably from about 0.15 to about 1.5%, more preferably from about 0.2 to about 0.6%, of at least one fixative polymer;

(b) from about 0.01% to about 20%, typically from about 0.1% to about 3%, most typically from about 0.4% to about 0.7%, by weight, of at least one plant butter having a hydrocarbon chain distribution C12:30-55%/C14:10-40%/C16:4-15%;

(c) from about 0.5% to about 6% of at least one agent selected from a cationic agent, conditioning agent, nonionic surfactant, and mixtures thereof;

(d) from about 0.5% to about 10%, typically from about 1% to about 8%, and more typically from about 2% to about 6%, by weight, of at least one fatty alcohol;

(e) water; and

(f) optionally at least one emollient, humectant or a mixture thereof; all weights being relative to the weight of the final composition.

Advantageously the composition of the invention is clear gives the hair manageability, good curl retention, and soft feel and sheen.

In an embodiment the invention is also directed to a method of improving the performance a leave-in hair treatment composition comprising adding to said composition a fixative polymer, in particular PQ-11, and a plant butter.

The Fixative Polymer (a)

The compositions of the invention comprise at least one fixative polymer.

Fixatives, including in particular fixative polymers for hair, are known in the hair care industry. See, e.g., US2040/0129307, WO13186486 and WO14023675. Non-limiting examples of such polymers that may be used in the current

compositions include polyvinylpyrrolidone, vinylpyrrolidone/vinyl acetate copolymers, acrylates/vinylpyrrolidone copolymers, polyquaternium-4, polyquaternium-6, polyquaternium-7, polyquaternium-10, polyquaternium-11, polyquaternium-16, polyquaternium-22, polyquaternium-28, polyquaternium-32, polyquaternium-55, and mixtures thereof.

In a preferred embodiment, the fixative is selected from polyquaternium-11 (PQ-11) (which is also known as copolymer vinylpyrrolidone/dimethylaminoethyl methacrylate quaternized, such as the product Gafquat[®] 734, which is commercially available from ISP/Ashland) and polyquaternium-55 (PQ-55) (such as the product Styleze[®] W-17L, commercially available from ISP/Ashland).

The compositions of the invention comprise at least one fixative polymer (a) in an amount preferably ranging from about 0.1% to about 3%, typically from about 0.15% to about 1.5%, most typically from about 0.2% to about 0.6%, by weight, relative to the weight of the composition.

Plant Butter (b)

The compositions of the invention comprise at least one plant butter hydrocarbon chain distribution C12:30-55%/C14:10-40%/C16:4-15%.

As used herein a "butter" is a fat that is solid at room temperature (25° C). A plant butter, often also referred to as a "vegetable butter," is a butter derived from a natural plant source.

Fats, such as butters, are generally characterized by their hydrocarbon chain length. See, e.g. US Pat. No. 5,554,408. Plant fats often have mixtures of different hydrocarbon lengths. Thus, a fat having a hydrocarbon chain distribution of C12:30-55%/C14:10-40% means the fat has two hydrocarbon chains, one having 12 carbons and being present in the fat in an amount from 30-55%, and a second hydrocarbon chain having 14 carbons and being present in the fat from 10-40%.

Non-limiting plant butters useful in the current compositions include, murumuru butter (*Astrocaryum murumuru*), cupuacu butter (*Theobroma grandiflorum*), babassu butter (*Corbignya*), and mixtures thereof.

In a preferred embodiment, the plant butter having hydrocarbon chain distribution C12:30-55%/C14:10-40%/C16:4-15% is selected from murumuru seed butter, babassu butter, or a mixture thereof, most preferably murumuru seed butter.

The compositions of the invention comprise at least one plant butter (b)

in an amount preferably ranging from about 0.01% to about 20%, typically from about 0.1% to about 3%, most typically from about 0.4% to about 0.7%, by weight, relative to the weight of the composition.

Cationic Agent and/or Conditioning Agent and/or Nonionic Surfactant(c)

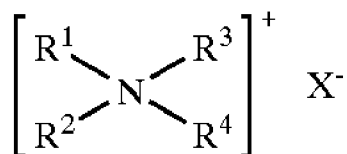
The compositions of the invention comprise at least one agent selected from cationic agent, a conditioning agent, a non-ionic surfactant, and mixtures thereof.

Cationic Agent

The cationic agent may be selected from cationic surfactants, cationic silicones and mixtures thereof.

The cationic surfactant useful in the cosmetic compositions disclosed herein optionally is selected from mono and di-alkyl quaternary ammonium or diammonium salts.

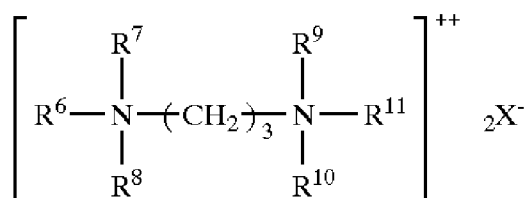
By way of example only, quaternary ammonium or diammonium salts described in US2005071933, incorporated by reference herein, may be chosen, such as, for example, those of the general formula (XXI):



wherein, in formula (XXI):

-R1 and R4, may independently be chosen from saturated or unsaturated, linear or branched, aliphatic hydrocarbon radicals comprising from 1 to about 30 carbon atoms, or an alkoxy, alkoxy carbonylalkyl, polyoxyalkylene, alkylamido, alkylamidoalkyl, hydroxyalkyl, aromatic, aryl or alkylaryl radical comprising from about 12 to about 30 carbon atoms, with at least one radical among R1, R2, R3 and R4 denoting a radical comprising from 8 to 30 carbon atoms; and -X⁻ is an anion chosen from the group comprising halides, phosphates, acetates, lactates and alkyl sulfates;

and/or general formula (XXII):



wherein, in formula (XXII):

-R6 denotes an aliphatic radical comprising from about 16 to 30 carbon atoms,

-R7, R8, R9, R10 and R11 are independently chosen from hydrogen or an alkyl radical comprising from 1 to 4 carbon atoms, and

-X⁻ is an anion chosen from the group comprising halides, acetates, phosphates and sulfates.

It is also possible to use ammonium salts containing at least one ester function such as those described in WO14056962A3. Preferably, the ammonium salts containing at least one ester function contain two ester functions.

Among the cationic surfactants that may be used in the composition according to the invention, are quaternary ammonium and diammonium salts include, for example, distearyldimethylammonium chloride, cetyltrimethylammonium chloride (such as, for example, the products sold under the trade name Dehyquart A by Cognis, or Quartamin 60 W25 by Kao, or Genamin CTAC 25 by Clariant), behenyltrimethylammonium chloride (such as the products sold for example by Clariant under the trade name Genamin KDMP or Genamin BTLF, or by Evonik Goldschmidt under the name Varisoft BT 85), behentrimonium chloride, cetrimonium chloride, oleocetyldimethylhydroxyethylammonium chloride, behenoylhydroxypropyltrimethylammonium chloride (such as the product sold by Kao under the name Quartamin BTC 131) stearamidopropyl dimethyl (myristyl acetate) ammonium chloride, dipalmitoylethylhydroxyethylmethylammonium salt such as dipalmitoylethylhydroxyethylmethylammonium methosulfate (INCI name ceterayl alcohol (and) dipalmitoylethyl hydroxyethylmonium methosulfate) (such as the product Dehyquart F 30 by Cognis), di(C₁-C₂ alkyl)(C₁₂-C₂₂ alkyl)hydroxy(C₁-C₂alkyl)ammonium salts, such as dialkyldimethylammonium or alkyltrimethylammonium salt in which the alkyl radical preferably comprises 12 to 24 carbon atoms, propanetallowdiammonium dichloride, behentrimonium methosulfate, and mixtures thereof.

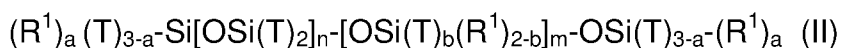
In a particular embodiment the cationic surfactant is selected from behentrimonium chloride, cetrimonium chloride, ceterayl alcohol (and) dipalmitoylethyl hydroxyethylmonium methosulfate, and mixtures thereof.

Cationic silicones include in particular amino silicones. The term "amino silicone" means any polyaminosiloxane, i.e. any polysiloxane comprising at least one

primary, secondary or tertiary amine function or a quaternary ammonium group. Preferably, the amino silicone(s) used in the cosmetic composition according to the present invention are selected from (A) - (D) as described below.

Amino silicones are described, for example, in US2011/0155163 and US2011/155164, both of which are herein incorporated by reference.

(A) Compounds corresponding to formula (II)



in which:

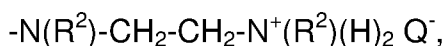
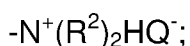
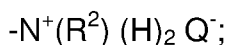
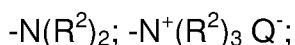
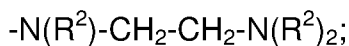
T is a hydrogen atom or a phenyl, hydroxyl (-OH) or C₁-C₈ alkyl radical, and preferably methyl, or a C₁-C₈ alkoxy, preferably methoxy,

a denotes the number 0 or an integer from 1 to 3, and preferably 0,

b denotes 0 or 1, and in particular 1,

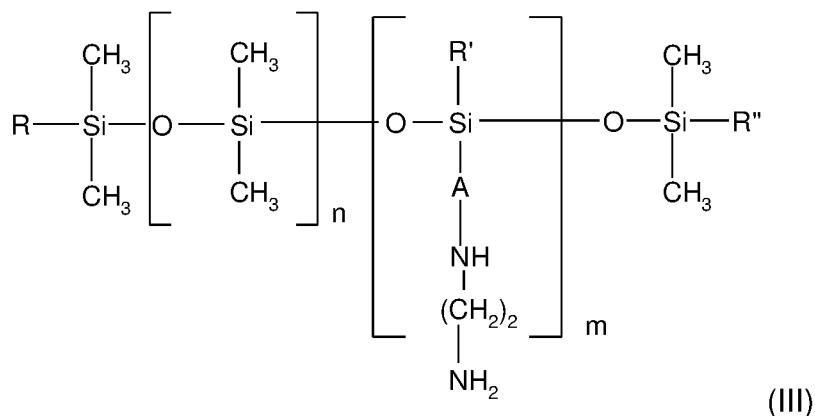
m and n are numbers such that the sum (n + m) can range especially from 1 to 2000 and in particular from 50 to 150, it being possible for n to denote a number from 0 to 1999 and in particular from 49 to 149, and for m to denote a number from 1 to 2000 and in particular from 1 to 10;

R¹ is a monovalent radical of formula -C_qH_{2q}L in which q is a number from 2 to 8 and L is an optionally quaternized amino group selected from the following groups:



in which R² denotes a hydrogen atom, a phenyl, a benzyl or a saturated monovalent hydrocarbon-based radical, for example a C₁-C₂₀ alkyl radical, and Q⁻ represents a halide ion, for instance fluoride, chloride, bromide or iodide.

In particular, the amino silicones corresponding to the definition of formula (II) are selected from the compounds corresponding to formula (III) below:



in which R, R' and R'', which may be identical or different, denote a C₁-C₄ alkyl radical, preferably CH₃; a C₁-C₄ alkoxy radical, preferably methoxy; or OH; A represents a linear or branched, C₃-C₈ and preferably C₃-C₆ alkylene radical; m and n are integers dependent on the molecular weight and whose sum is between 1 and 2000.

According to a first possibility, R, R', R'', which may be identical or different, represent a C₁-C₄ alkyl or hydroxyl radical, A represents a C₃ alkylene radical and m and n are such that the weight-average molecular weight of the compound is between 5000 and 500 000 approximately. Compounds of this type are referred to in the CTFA dictionary as "aminodimethicones".

According to a second possibility, R, R' and R'', which may be identical or different, represent a C₁-C₄ alkoxy or hydroxyl radical, at least one of the radicals R or R'' is an alkoxy radical and A represents a C₃ alkylene radical. The hydroxy/alkoxy molar ratio is preferably between 0.2/1 and 0.4/1 and advantageously equal to 0.3/1. Moreover, m and n are such that the weight-average molecular weight of the compound is between 2000 and 10⁶. More particularly, n is between 0 and 999 and m is between 1 and 1000, the sum of n and m being between 1 and 1000.

In this category of compounds, mention may be made, *inter alia*, of the product BELSIL[®] ADM 652 sold by Wacker.

According to a third possibility, R and R'', which are different, represent a C₁-C₄ alkoxy or hydroxyl radical, at least one of the radicals R or R'' is an alkoxy radical, R' represents a methyl radical and A represents a C₃ alkylene radical. The hydroxy/alkoxy molar ratio is preferably between 1/0.8 and 1/1.1 and advantageously equal to 1/0.95. Moreover, m and n are such that the weight-average molecular weight of the compound is between 2000 and 200 000. More particularly, n is between 0 and 999 and m is between 1 and 1000, the sum of n and m being

between 1 and 1000.

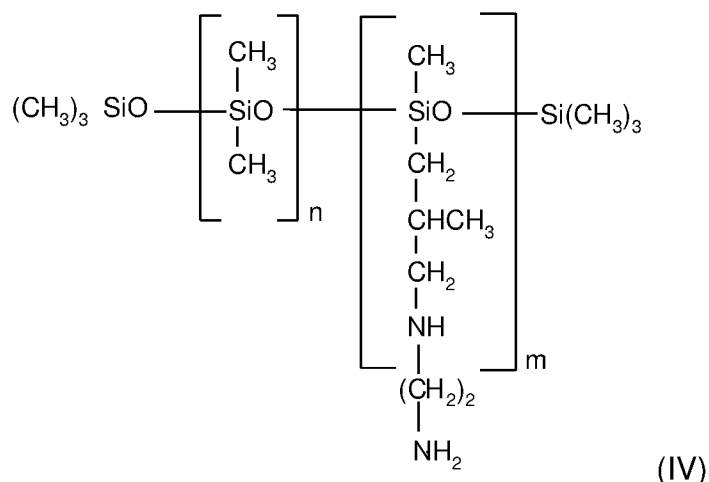
More particularly, mention may be made of the product FLUID WR[®] 1300 sold by Wacker.

According to a fourth possibility, R and R' represent a hydroxyl radical, R' represents a methyl radical and A is a C₄-C₈ and preferably C₄ alkylene radical. Moreover, m and n are such that the weight-average molecular weight of the compound is between 2000 and 10⁶. More particularly, n is between 0 and 1999 and m is between 1 and 2000, the sum of n and m being between 1 and 2000.

A product of this type is especially sold under the name DC 28299 by Dow Corning.

The molecular weight of these silicones is determined by gel permeation chromatography (ambient temperature, polystyrene standard; μ styragem columns; eluent THF; flow rate 1 mm/m; 200 μ l of a solution containing 0.5% by weight of silicone in THF are injected, and detection is performed using a refractometer and a UV meter).

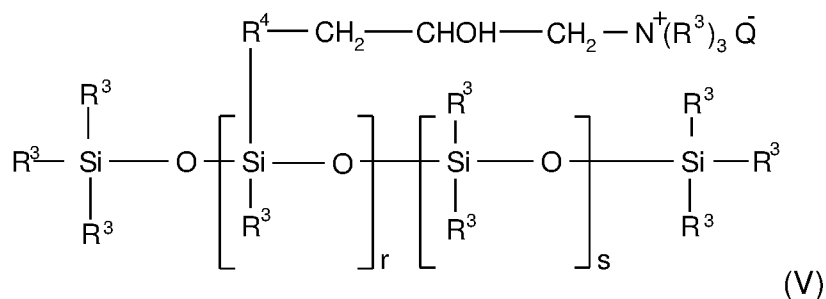
A particular product of formula (I) is the polymer known in the CTFA dictionary (7th edition, 1997) as "trimethylsilylamodimethicone", corresponding to formula (IV)



in which n and m have the meanings given above in accordance with formula (II) or (III) above.

Such compounds are described, for example, in EP 0 095 238, which is herein incorporated by reference. A compound of formula (IV) is sold, for example, under the name Q2-8220 by the company OSI.

(B) The second type of amino silicone compounds correspond to formula (V)



in which:

R^3 represents a C_1 - C_{18} monovalent hydrocarbon-based radical, and in particular a C_1 - C_{18} alkyl or C_2 - C_{18} alkenyl radical, for example methyl;

R^4 represents a divalent hydrocarbon-based radical, especially a C_1 - C_{18} alkylene radical or a divalent C_1 - C_{18} , and for example C_1 - C_8 , alkyleneoxy radical;

Q^- is a halide ion, in particular chloride;

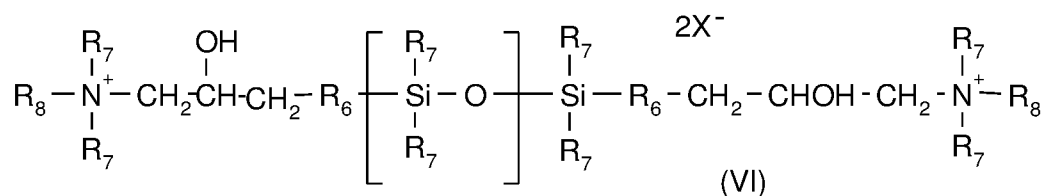
r represents a mean statistical value from 2 to 20 and in particular from 2 to 8;

s represents a mean statistical value from 20 to 200 and in particular from 20 to 50.

Such compounds are described more particularly in US Patent 4,185,087, which is herein incorporated by reference.

A compound falling within this class is the product sold by the company Union Carbide under the name Ucar Silicone ALE 56.

(C) Quaternary ammonium silicones of formula (VI) are another type of silicone useful in the invention:



in which:

R_7 , which may be identical or different, represent a monovalent hydrocarbon-based radical containing from 1 to 18 carbon atoms, and in particular a C_1 - C_{18} alkyl radical, a C_2 - C_{18} alkenyl radical or a ring comprising 5 or 6 carbon atoms, for example methyl;

R_6 represents a divalent hydrocarbon-based radical, especially a C_1 - C_{18} alkylene radical or a divalent C_1 - C_{18} , and for example C_1 - C_8 , alkyleneoxy radical linked to the Si via an SiC bond;

R_8 , which may be identical or different, represent a hydrogen atom, a monovalent hydrocarbon-based radical containing from 1 to 18 carbon atoms, and in particular a C_1 - C_{18} alkyl radical, a C_2 - C_{18} alkenyl radical or a radical $-R_6-NHCOR_7$;

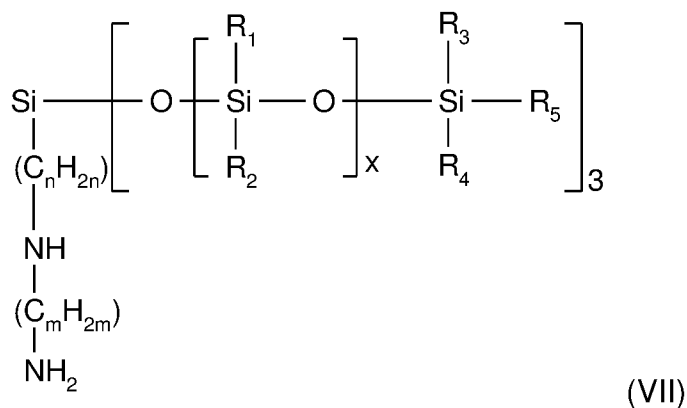
X^- is an anion such as a halide ion, especially chloride, or an organic acid salt (acetate, etc.); and

r represents a mean statistical value from 2 to 200 and in particular from 5 to 100.

These silicones are described, for example, in patent application EP-A 0 530 974, which is herein incorporated by reference.

An example of the compound of formula (VI) is the product referenced in the CTFA dictionary (1997 edition) as Quaternium 80. Such a product is marketed by the company Evonik Goldschmidt under the names ABIL QUAT 3272 or 3474.

(D) Formula (VII) below provides another example of amino silicones useful in the invention:



in which:

- R_1 , R_2 , R_3 and R_4 , which may be identical or different, denote a C_1 - C_4 alkyl radical or a phenyl group,

- R_5 denotes a C_1 - C_4 alkyl radical or a hydroxyl group,

- n is an integer ranging from 1 to 5,

- m is an integer ranging from 1 to 5,

and in which x is selected such that the amine number is between 0.01 and 1 meq/g.

Amino silicone(s) that are particularly useful in the invention include polysiloxanes containing amine groups, such as the compounds of formula (III) or of formula (IV), and even more particularly the silicones containing quaternary ammonium groups of formula (VI).

Non-limiting examples of particularly useful silicones include

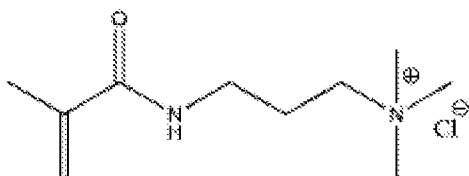
aminodimethicones, such as the products available from the company Wacker under the name FLUID[®] (for example FLUID[®] WR 1300) and BELSIL[®] (for example BELSIL[®] ADM LOG1) and a product available from Momentive Performance Material under the name SILSOFT[®]. Also useful is trimethylsilylamodimethicone (such as Q@-8220 available from OSI).

Conditioning Agent

In addition to the cationic agents described above, the composition of the invention may include a conditioning agent chosen, from example, from a cationic polymer, including homopolymers and copolymers.

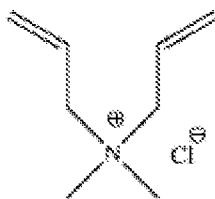
Non-limiting examples of cationic conditions polymers that can be used in the current compositions include: cationic cellulose derivatives, such as for example polyquaternium-10 ("PQ-10"); cationic gum derivatives such as for example gum derivatives, including particularly guar hydroxypropyltrimonium chloride (such as the products Jaguar[®] C13S from Rhodia and N-Hance[®] CG13 form Ashland); polymer derivatives of diallyldimethyl ammonium chloride ("poly-DADMACs") and of methacrylamidopropyltrimethylammonium chloride ("poly-MAPTACs"), and having the following formulas:

MAPTAC:



; and

DADMAC:



Non-limiting examples of poly-DADMACs and poly- poly-MAPTACs include, polyquaternium-4 (PQ-4), polyquaternium-5 (PQ-5), polyquaternium-6 (PQ-6), polyquaternium-7 (PQ-7), polyquaternium-22 (PQ-22), polyquaternium-37 (PQ-37), polyquaternium-39 (PQ-39), polyquaternium47 (PQ-47) and polyquaternium-53 (PQ-53), particularly DADMAC-based polymers, specifically PQ-6 and PQ-22.

Cationic proteins, such as, for example, hydroxypropyltrimonium

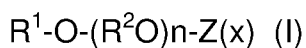
hydrolyzed wheat protein are also useful as cationic conditioning agents.

In a particular embodiment, the cationic conditioning polymer is selected from guar hydroxypropyltrimonium chloride.

Nonionic Surfactant

Nonionic surfactants useful in the cosmetic compositions disclosed herein is selected from: alkyl polyglucosides; ethylene glycol, propylene glycol, glycerol, polyglyceryl esters and their ethoxylated derivatives (herein jointly referred to as "glycol ethers"); as well as amine oxides; and mixtures the foregoing.

Alkyl polyglucosides useful in the compositions of the invention include those having the following formula (I):



wherein

R^1 is an alkyl group having 8-18 carbon atoms;

R^2 is an ethylene or propylene group;

Z is a saccharide group with 5 to 6 carbon atoms;

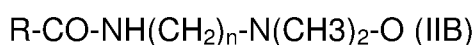
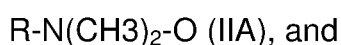
n is an integer from 0 to 10; and

x is an integer from 1 to 5.

Such alkyl poly glucoside compounds include lauryl glucoside, octyl glucoside, decyl glucoside, coco glucoside, sucrose laurate, caprylyl/capryl glucoside, and sodium lauryl glucose carboxylate, and mixtures thereof. Typically, the at least one alkyl poly glucoside compound is selected from the group consisting of lauryl glucoside, decyl glucoside and coco glucoside, and more typically lauryl glucoside.

Non-limiting examples of glycol esters useful in the compositions of the invention include those described in M. R. Porter et al., Handbook of Surfactants, Ch. 7, §7.12, pp. 231-235 (2nd Ed. 1994), which is herein incorporated by reference. Preferred glycol esters have HLB values between about 9 and about 18. Particular glycol esters useful in the compositions of the invention include PEG-8 glyceryl laurate, polysorbate-40, polyglyceryl-5 laurate, and mixtures thereof.

Amine oxides useful in the compositions of the invention include those having the formulas (IIA) and (IIB)



wherein

R is an alkyl group having 8-18 carbon atoms; and

n is an integer from 1 to 3.

A non-limiting example of a particular amine oxide is lauramine oxide.

The at least one cationic agent and/or conditioning agent and/or nonionic surfactant, or mixtures thereof, is present in the compositions of the invention in an amount of from about 0.5% to about 6% by weight, typically from about 0.6% to about 3.5% by weight, and more typically from about 0.75% to about 2%, by weight, including all ranges and sub ranges therebetween, based on the total weight of the composition as a whole.

Fatty Alcohol (d)

The compositions of the invention include at least one fatty alcohol.

Fatty alcohols have the structure R-OH in which R is a saturated or unsaturated, linear or branched radical containing from 8 to 40, preferably from 8 to 30, carbon atoms. Preferably, R preferably a C12-C24 alkyl or C12-C24 alkenyl group. R may be substituted with one or more hydroxyl groups.

Non-limiting examples of fatty alcohols useful in the compositions of the invention include lauryl alcohol, myristyl alcohol, cetyl alcohol, dodecyl alcohol, decyl alcohol, stearyl alcohol, oleyl alcohol, behenyl alcohol, linoleyl alcohol, undecylenyl alcohol, palmitoleyl alcohol, arachidonyl alcohol, erucyl alcohol, and mixtures thereof.

In an embodiment, the fatty alcohol is itself a may be a mixture of several species of fatty alcohols. Such fatty alcohol mixtures include, for example, cetearyl alcohol (mixture of cetyl and stearyl alcohols) and cetylstearyl alcohol.

In a preferred embodiment, the fatty alcohol is selected from cetyl alcohol, stearyl alcohol, cetearyl alcohol, and mixtures thereof.

The at least one fatty alcohol is present in the compositions of the invention in an amount of from about 0.5% to about 10% by weight, typically from about 1% to about 8% by weight, and more typically from about 2% to about 6%, by weight, including all ranges and sub ranges therebetween, based on the total weight of the composition as a whole.

Water (e)

The compositions of the invention include water. The compositions can be aqueous or oil-in-water emulsions or water-in-oil emulsions. The water is present in the compositions of the invention in an amount of from about 60% to about 98%, preferably from about 70% to about 97%, more particularly from about from about 80% to about 95%, by weight, including all ranges and subranges therebetween, all

weights being based on the total weight of the composition.

Emollient/Humectant (f) (Optional)

The compositions of the invention optionally may include one or more emollient and/or humectants and/or moisturizers (herein generally referred to as "emollients"). These compounds hydrate the keratinous substrate, and also provide a shiny look. Emollients are known to skilled artisan. See, e.g. *International Cosmetic Ingredient Dictionary and Handbook Vol. 4* (9th ed. 2002), more particularly the emollients disclosed on pages 2930-2936. The disclosure of the *International Cosmetic Ingredient Dictionary and Handbook Vol. 4*, pages 2930-2936, is hereby incorporated by reference.

Without limitation, the emollients that may be used in the compositions of the invention include, for example: glycerin; glycerol; propylene glycol; butylene glycol; carnauba wax; beeswax; candelilla; ozokerite; paraffin; rice bran wax; microcrystalline wax; polyethylene wax; mineral oil; almond oil; castor oil; sesame oil; hydrogenated polyisobutene; butylene glycol dicaprylate dicaprate (commercially available from Sasol as Myglyol[®]); and mixtures thereof.

In a particular embodiment the emollient is glycerin.

The emollient is present in the composition of the invention in an amount of from about 0.05% to about 40%, preferably from about 0.1% to about 5%, more particularly from about 0.3% to about 1%, by weight, including all ranges and subranges therebetween, all weights being based on the total weight of the composition.

Silicone Oil (g) (Optional)

The composition of the present disclosure may optionally also include a silicone oil or a mixtures of such oils.

Non-limiting examples of silicone oils include polydimethylsiloxanes (PDMS), phenylated polyorganosiloxanes such as phenyltrimethicones, phenyltrimethylsiloxy-diphenylsiloxanes, diphenylmethyldimethyltrisiloxanes, diphenyldimethicones, phenyldimethicones, polymethyl-phenylsiloxanes, optionally fluorinated; polysiloxanes modified with fatty acids, fatty alcohols or polyoxyalkylenes, fluorinated silicones, perfluorinated silicone oils, aminated silicone oils.

Preferred silicone oils include polydimethylsiloxanes, polymethylphenylsiloxanes, and mixtures thereof.

These silicone oils can optionally comprise alkyl, hydroxyl or alkoxy

groups at the end of the silicone chain or pendant, for example polydimethylsiloxanes with trimethylsilyl end groups and polydimethylsiloxanes with dimethylsilanol end groups.

As examples of polydimethylsiloxanes with trimethylsilyl end groups, we may notably mention those having a viscosity from $5 \cdot 10^{-6}$ to $2.5 \text{ m}^2/\text{s}$ at 25 degrees centigrade and preferably $1 \cdot 10^{-5}$ to $1 \text{ m}^2/\text{s}$. The viscosity of the silicones is for example measured at 25 degrees centigrade according to standard ASTM 445 Appendix C.

Non-liming examples of polyalkylsiloxanes, include the following commercial products:

- the SILBIONE oils of series 47 and 70 047 or the MIRASIL oils marketed by RHONE POULENC such as for example the oil 70 047 V 500 000;
- the oils of the MIRASIL series marketed by the company RHODIA;
- the oils of the 200 series from the company DOW CORNING such as more particularly DC200 of viscosity 60 000 cSt;
- the oils sold under the trade name Belsil DM 300000 and Belsil DM 60000 by the company Wacker Chemie AG;
- the VISCASIL oils from GENERAL ELECTRIC and certain oils of the SF series (SF 96, SF 18) from GENERAL ELECTRIC.

Also useful are polydimethylsiloxanes with dimethylsilanol end groups (Dimethiconol according to the CTFA designation) such as the oils of the 48 series from the company RHODIA.

As silicone oil usable in the invention, we may also mention the linear or cyclic silicones, and in particular with from 2 to 7 silicon atoms. Examples of such cyclic silicones include octamethylcyclotetrasiloxane, decamethylcyclopentasiloxane, hexadecamethylcyclohexasiloxane, heptamethylhexyltrisiloxane, heptamethyloctyltrisiloxane and mixtures thereof.

Further examples of useful silicone oils are provided in US2012/003172.

The oils that are particularly preferred within the scope of the present invention are polydimethylsiloxanes and mixtures thereof. In a particular embodiment the polydimethyl siloxane oil is dimethicone, such as Belsil 60000 from Wacker.

If present, the silicone oil may be used in an amount from about 0.05% to about 3%, typically from about 0.5% to about 1.5%, more particularly from about

0.2% to about 1%, by weight, including all ranges and subranges therebetween, all weights being based on the total weight of the composition.

Further Optional Additives (h)

The composition of the present disclosure may additionally include any other adjuvant or additive that is usually used in the field of hair care. A person skilled in the art would know which adjuvants and/or additives to select to achieve the desired results (e.g. preservatives) without adversely affecting the properties of claimed compositions. For example, such additives include pH adjusting agents, preserving agents, sequestrants and chelators, consistency regulators (e.g. isopropyl alcohol), thickeners, antioxidants, fragrances, dyestuffs such as soluble dyes and pigments, optical brighteners, electrolytes and stabilizers (e.g. sodium chloride, glycerin), plant extracts, proteins, amino acids, vitamins, glycols, emollients, derivatives of the foregoing, and mixtures thereof. Such additives are described, for example in US2012/0308492 at [0079]- [0080] and US2006/0217283 at [0084] – [0087], both of which are herein incorporated by reference. Still further examples of such additional ingredients may be found in the *International Cosmetic Ingredient Dictionary and Handbook* (14th ed. 2014).

The compositions of the invention preferably do not include waxes.

Non-limiting examples of pH adjusting agents include potassium acetate, potassium hydroxide, sodium carbonate, sodium hydroxide, phosphoric acid, succinic acid, sodium citrate, citric acid, boric acid, lactic acid, sodium hydrogen carbonate, ethanol amines, and mixtures thereof. In a particular embodiment, the pH adjusting agent is selected from citric acid.

Non-limiting examples of useful preservatives include ethanol, polyvinyl alcohol, phenoxyethanol, benzyl alcohol, salicylic acid, sodium benzoate, caprylyl glycol, methyl paraben, propyl paraben, ethylhexylglycerin, 1,3-propanediol, chlorophensin, methylchloroisothiazolinone, methylisothiazolinone, benzalkonium chloride, polyaminopropyl biguanide, chlorhexidine dihydrochloride, and mixtures thereof. In a particular embodiment, the preservatives are selected from chlorhexidine dihydrochloride, sodium benzoate, and mixtures thereof.

Chelating agents and antioxidants are ingredients which assist in preventing or retarding spoilage. Examples of antioxidants suitable for use in the present composition are potassium sulfite, sodium bisulfite, sodium erythrobate, sodium metabisulfite, sodium sulfite, propyl gallate, cysteine hydrochloride, butylated

hydroxytoluene, butylated hydroxyanisole, and mixtures thereof. Suitable chelators include salts of ethylenediaminetetraacetic acid (“EDTA”), butylated hydroxytoluene (“BHT”), and mixtures thereof. In a particular embodiment, the antioxidant/chelator is BHT.

A person skilled in the art will take care to select the optional additional additives and/or the amount thereof such that the advantageous properties of the composition according to the invention are not, or are not substantially, adversely affected by the envisaged addition.

When used, these additives may be present in the composition in a proportion from 0.005% to 15% (such as from 0.01% to 10%) relative to the total weight of the composition and further such as from 0.01% to 5%.

The compositions according to the invention can be manufactured by known processes used generally in the cosmetics, including the processes described in the examples below.

The present invention will be better understood from the examples below, all of which are intended for illustrative purposes only.

EXAMPLES

A composition in accordance with the present invention for the treatment of hair was prepared as described below. The materials and amounts employed in the example are provided in Table 1 below.

Table 1

| Phase | INCI US Name | Example 1 (Wt% actives) | Example 2 (Wt% actives) |
|--------------|--|--|--|
| C | polyquaternium-11 (a) (Gafquat 734, ISP Ashland) | 0.30 | 0.24 |
| A | astrocaryum murumuru seed butter (b) (Rain Forest rf3710, Beraca Sabara Quimicos e Ingredientes) | 0.50 | 0.50 |
| B | orbignya oleifera seed butter (refined organic babassu) (b) | 0 | 0.01 |
| A | cetrimonium chloride (c) | 0.38 | 0.38 |

| | | | |
|---|---|-------|--|
| | (Dehyquart, Cognis (BASF)) | | |
| A | behentrimonium chloride (c) (Fentacare 2231 ef, Rhodia) | 0.47 | 0 |
| A | cetearyl alcohol (67-72%)(d) (and) dipalmitoylethyl hydroxyethylmonium methosulfate (28-33%) (c) (Dehyquart [®] f 30, Cognis/Basf) | 0 | 3.25 (about 2.3/1 wt% actives of (d)/(c)) |
| B | guar hydroxypropyltrimonium chloride (Jaguar C13- 2, Rhodia or N-hance CG13, Ashland) (c) | 0 | 0.245 |
| A | cetearyl alcohol (Lanette D, Cognis (BASF)) (d) | 4.20 | 2.5 |
| B | amodimethicone (c) (Xiameter Mem 8299 Emulsion, Dow Corning) | 0.29 | 0 |
| B | dimethicone (g) (Belsil DM 60000, Wacker) | 0 | 1.0 |
| A | mineral oil (f) | 1.50 | 1.50 |
| A | glycerin (f) | 0.50 | 0.50 |
| A | antioxidants (h) | 0.05 | |
| D | Other Cosmetic Additives (e.g. preservatives, pH adjusters, fragrance) (h) | qs | qs |
| | Water (e) | 90.21 | 89.88 |
| | Total | 100% | 100% |
| | Fixative:plant butter | 1:1 | 1:2.13 |

Process for Making Compositions

One quarter of the water was combined with phase A. The temperature was brought to 65°C and the composition was stirred at 3200 RMP for 10 minutes. 8% of the water was then added. The temperature was brought to 40 °C and the components of phase B were added with mixing. Thereafter, the rest of the water and the remaining components (phases C and D) were added with mixing.

SET OF CLAIMS

1. An aqueous cosmetic composition comprising:
 - (a) from 0.1% to 3%, by weight, of at least one fixative polymer;
 - (b) from 0.01% to 20%, by weight, of at least one plant butter having a hydrocarbon chain distribution C12:30-55%/C14:10-40%/C16:4-15%;
 - (c) from 0.5% to 6%, by weight, of at least one agent selected from a cationic agent, conditioning agent, nonionic surfactant, and mixtures thereof;
 - (d) from 0.5% to 10%, by weight, of at least one fatty alcohol;
 - (e) water; and
 - (f) optionally at least one emollient, humectant or a mixture thereof;and
all weights being relative to the weight of the final composition.
2. The composition of claim 1 wherein the ratio of the fixative polymer to the plant butter, by weight, is from about 1:1 to about 1:10.
3. The composition of any preceding claim having a viscosity at 25 °C of from 15 cP to 55 cP.
4. The composition of any preceding claim further comprising an emollient, humectant or a mixture thereof.
5. The composition of any preceding claim having a pH at 25 °C of from 4 to 5.
6. The composition of any preceding claim further comprising from about 0.2% to about 1%, by weight, of a pH adjuster.
7. The composition of any preceding claim further comprising a silicone oil.
8. The composition of any preceding claim wherein the fixative polymer (a) is selected from PQ-11, PQ-55, and mixtures thereof.
9. The composition of any preceding claim wherein the plant butter (b) is selected from murumuru seed butter, babassu butter, and mixtures thereof.
10. The composition of any preceding claim wherein the cationic agent (c) is selected from behentrimonium chloride, cetrimonium chloride, dipalmitoylethyl hydroxyethylmonium methosulfate, and mixtures thereof.
11. The composition of any preceding claim wherein the cationic

agent (c) is selected from aminodimethicone, trimethylsilylamodimethicone, and mixtures thereof.

12. The composition of any preceding claim wherein the conditioning agent (c) is selected from guar hydroxypropyltrimonium chloride.

13. The composition of any preceding claim wherein the fatty alcohol (d) is selected from cetyl alcohol, stearyl alcohol, cetearyl alcohol, and mixtures thereof.

14. The composition of any preceding claim wherein the water is present in an amount from 70% to 97%.

15. The composition of claim 4 wherein the emollient is glycerin.

16. The composition of claim 7 wherein the silicone oil is dimethicone.

17. The composition of any preceding claim further comprising any one or more citric acid, chlorhexidine dihydrochloride, sodium benzoate, and mixtures thereof.

18. An aqueous cosmetic composition for hair comprising:

(a) from 0.15% to 1.5%, by weight of at least one fixative polymer;

(b) from 0.1% to 3%, by weight, of at least one plant butter having a hydrocarbon chain distribution C12:30-55%/C14:10-40%/C16:4-15%;

(c) from 0.5% to 3.5%, by weight, of at least one agent selected from a cationic agent, conditioning agent, nonionic surfactant, and mixtures thereof;

(d) from 1% to 8%, by weight, of at least one fatty alcohol;

(e) from 70% to 97%, by weight, water;

(f) optionally an emollient, humectant, or mixture thereof;

(g) optionally a silicone oil; and

(h) from about 0.01 to about 3% of at least one preservative, pH adjuster, or a mixture thereof;

wherein the ratio of the fixative polymer to the at least one plant butter, by weight, is from about 1:1 to about 1:3; said composition having a viscosity from about 20 cP to about 50 cP and a pH at 25 °C of from about 4 to about 5, all weights and ratios being relative to the weight of the final composition.

19. Use of the composition as defined in anyone of the preceding claims as a hair treatment composition.

20. A method of improving at least one property chosen from long

lasting manageability, volume control and shine of hair comprising applying to the hair topically a composition as defined in anyone of claims 1-18.

INTERNATIONAL SEARCH REPORT

International application No
PCT/BR2014/050044

A. CLASSIFICATION OF SUBJECT MATTER
 INV. A61K8/34 A61K8/41 A61Q5/06 A61Q5/12 A61K8/81
 A61K8/92
 ADD.
 According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
 Minimum documentation searched (classification system followed by classification symbols)
 A61K A61Q

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| X | GB 2 321 644 A (BODY SHOP INT PLC [GB]) 5 August 1998 (1998-08-05) page 4 - page 5; claims 1, 2, 6 ----- | 1-20 |
| X | DATABASE GNPD [Online] MINTEL; April 2013 (2013-04), "Restorative Blowout Perfector", XP002744127, Database accession no. 2038931 the whole document ----- -/-- | 1-20 |

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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| Date of the actual completion of the international search 7 September 2015 | Date of mailing of the international search report 25/09/2015 |
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| Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016 | Authorized officer Donovan-Beermann, T |
|--|---|

INTERNATIONAL SEARCH REPORT

International application No
PCT/BR2014/050044

| C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|--|--|-----------------------|
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| X | <p>DATABASE GNPDP [Online] MINTEL; May 2011 (2011-05), "Shampoo", XP002744128, Database accession no. 1551402 the whole document</p> <p style="text-align: center;">-----</p> | 1-20 |
| X | <p>DATABASE GNPDP [Online] MINTEL; October 2006 (2006-10), "Hydrating Hair Mask", XP002744129, Database accession no. 605038 the whole document</p> <p style="text-align: center;">-----</p> | 1-20 |
| X | <p>DATABASE GNPDP [Online] MINTEL; September 2014 (2014-09), "Hydra Tenseo Intense Moisturizing Treatment", XP002744130, Database accession no. 2658261 the whole document</p> <p style="text-align: center;">-----</p> | 1-20 |
| X | <p>DATABASE GNPDP [Online] MINTEL; April 2012 (2012-04), "Hair Shampoo", XP002744131, Database accession no. 1780923 the whole document</p> <p style="text-align: center;">-----</p> | 1-20 |
| X | <p>DATABASE GNPDP [Online] MINTEL; May 2013 (2013-05), "Volumizing Conditioner", XP002744132, Database accession no. 2063206 the whole document</p> <p style="text-align: center;">-----</p> | 1-20 |
| X | <p>DATABASE GNPDP [Online] MINTEL; January 2008 (2008-01), "Design Cream", XP002744133, Database accession no. 850115 the whole document</p> <p style="text-align: center;">-----</p> | 1-20 |
| | ----- -/-- | |

INTERNATIONAL SEARCH REPORT

International application No
PCT/BR2014/050044

| C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|--|---|-----------------------|
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| X | DATABASE GNP [Online] MINTEL; April 2011 (2011-04), "Hair Mask Treatment", XP002744134, Database accession no. 1509648 the whole document | 1-20 |
| X | ----- DATABASE GNP [Online] MINTEL; January 2012 (2012-01), "Conditioner", XP002744135, Database accession no. 1703615 the whole document | 1-20 |
| X | ----- DATABASE GNP [Online] MINTEL; July 2013 (2013-07), "Conditioner", XP002744136, Database accession no. 2116777 the whole document | 1-20 |
| X | ----- DATABASE GNP [Online] MINTEL; June 2014 (2014-06), "Anti-Frizz Smoothing Conditioner", XP002744137, Database accession no. 2452045 the whole document | 1-20 |
| X | ----- DATABASE GNP [Online] MINTEL; June 2008 (2008-06), "Heaven In Hair Intense Moisture Treatment", XP002744138, Database accession no. 935345 the whole document | 1-20 |
| A | ----- US 2013/164242 A1 (TAMARESELYV KRISHNAN [US] ET AL) 27 June 2013 (2013-06-27) paragraph [0171]; table 17 | 1-20 |
| A | ----- US 2007/202069 A1 (TAMARESELYV KRISHNAN [US] ET AL) 30 August 2007 (2007-08-30) example 67 | 1-20 |
| | ----- | |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/BR2014/050044

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|--|------------------|-------------------------|--------------------------------|
| GB 2321644 | A | 05-08-1998 | GB 2321061 A 15-07-1998 |
| | | | GB 2321644 A 05-08-1998 |
| ----- | | | |
| US 2013164242 | A1 | 27-06-2013 | CN 103153277 A 12-06-2013 |
| | | | EP 2611412 A2 10-07-2013 |
| | | | ES 2502590 T3 03-10-2014 |
| | | | JP 2013540721 A 07-11-2013 |
| | | | KR 20130102572 A 17-09-2013 |
| | | | US 2013164242 A1 27-06-2013 |
| | | | WO 2012030750 A2 08-03-2012 |
| | | | WO 2012031113 A2 08-03-2012 |
| ----- | | | |
| US 2007202069 | A1 | 30-08-2007 | BR PI0708169 A2 17-05-2011 |
| | | | CN 101404978 A 08-04-2009 |
| | | | EP 1988873 A2 12-11-2008 |
| | | | ES 2398923 T3 22-03-2013 |
| | | | JP 5558721 B2 23-07-2014 |
| | | | JP 2009528403 A 06-08-2009 |
| | | | JP 2013032398 A 14-02-2013 |
| | | | KR 20080107431 A 10-12-2008 |
| | | | US 2007202069 A1 30-08-2007 |
| | | | WO 2007101059 A2 07-09-2007 |
| ----- | | | |