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(54) Title: COSMETIC COMPOSITION COMPRISING A BIS-AMINO SILICONE, A CATIONIC SURFACTANT, A FATTY ALCOHOL AND A FATTY ALCOHOL ESTER, COSMETIC TREATMENT PROCESS AND USE

(57) Abstract: The present invention relates to a cosmetic composition, notably a haircare composition, comprising a combination of bis-amino silicone, cationic surfactant, fatty alcohol and ester of carboxylic acid and of alcohol comprising from 8 to 24 carbon atoms. The invention also relates to a process for the cosmetic treatment of keratin materials, notably the hair, using such a composition and to its use for the cosmetic treatment of keratin materials.

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DESCRIPTION

Title of the invention: Cosmetic composition comprising a bis-amino silicone, a cationic surfactant, a fatty alcohol and a fatty alcohol ester, cosmetic treatment process and use

The present invention relates to a cosmetic composition comprising at least one α,ω -bis-amino silicone, at least one cationic surfactant, at least one fatty alcohol and at least one particular fatty alcohol ester. The invention also relates to a process for the cosmetic treatment of keratin materials, notably keratin fibres such as the hair, comprising the application of such a composition, and also to the use of such a cosmetic composition for the cosmetic treatment of keratin materials, in particular human keratin fibres such as the hair.

Hair is generally damaged and embrittled by the action of external atmospheric agents such as light and bad weather, and also by mechanical or chemical treatments, such as brushing, combing, dyeing, bleaching, permanent-waving and/or relaxing, or even repeated washing.

Hair is thus damaged by these various factors and may over time become dry, coarse, brittle or dull, notably in fragile areas, and more particularly at the ends.

Thus, to overcome these drawbacks, it is common practice to resort to haircare treatments using compositions that condition the hair, giving it satisfactory cosmetic properties, notably in terms of smoothness, sheen, softness, suppleness, lightness, a natural feel and good disentangling properties.

These haircare compositions intended to be applied regularly to the hair may be, for example, hair conditioners, masks or sera, and may be in the form of gels, hair lotions or care creams that are more or less thick.

It is in particular known practice to use compositions in the form of oily sera, containing combinations of silicone oils or non-silicone oils.

However, such compositions all too often result in excessive greasing of the keratin fibres, which is reflected by a greasy or even tacky feel, and a lank, weighed-down visual appearance of said fibres.

In addition, when oil-containing compositions are applied to the hair, they frequently lead to an unpleasant feel, the hair notably tending to feel rough and/or "squeaky" (i.e. producing an unpleasant sound effect) in particular when the hair strands are rubbed together while running the fingers along the hair from the root to the end.

These compositions are generally difficult to rinse out, and do not provide a clean feel while at the same time having a smooth or soft feel.

Moreover, hair treated with such compositions is neither easy nor quick to dry.

Finally, the immediate benefits afforded by such compositions are not always sufficient for the most damaged hair.

In addition, they are not very long-lasting and tend to fade out quickly, or even to disappear, after a single shampoo wash.

5 The present invention is directed towards proposing compositions which do not have the drawbacks mentioned previously, and which are capable of conditioning keratin materials, in particular keratin fibres such as the hair, in a more long-lasting manner, which is notably resistant to at least one shampoo wash.

10 This aim is achieved by means of the present invention, one subject of which is notably a cosmetic composition comprising:

- (i) one or more α,ω -bis-amino silicones,
- (ii) one or more cationic surfactants,
- (iii) one or more fatty alcohols, and
- (iv) one or more esters of carboxylic acid(s) and of alcohol(s) comprising from 8 to 15 24 carbon atoms.

20 The compositions according to the invention give good cosmetic properties to keratin materials, notably to keratin fibres, in particular to the hair; they are particularly suitable for providing a very good level of care, notably in terms of providing softness, fluidity, sheen, suppleness, coating and smoothness to the touch (a smooth feel).

In addition, these properties are provided relatively evenly throughout the head of hair, from the root to the end.

25 It has also been found that the compositions according to the invention have good working qualities: they are easy to apply and to spread on the keratin materials or fibres and, where necessary, they are easily and quickly removed by simply rinsing said keratin materials or fibres.

30 The hair retains a clean (non-greasy or weighed-down) feel, despite being conditioned (treated, notably soft, supple and flowing).

Even when the composition is not rinsed out, when it is used as a leave-on composition, for example, the fibres remain light, not laden and not tacky, and have a clean feel.

35 In addition, these compositions have a good durability of the effects over time (for at least 24 hours) and good persistence of the effects, for example for at least one shampoo wash.

40 A subject of the invention is also a cosmetic process for treating keratin materials, notably keratin fibres, in particular human keratin fibres such as the hair, comprising the application to said keratin materials of a composition as defined previously.

Another object of the present invention concerns the use of the composition as defined previously for the cosmetic treatment, notably conditioning, of keratin materials, in particular human keratin materials.

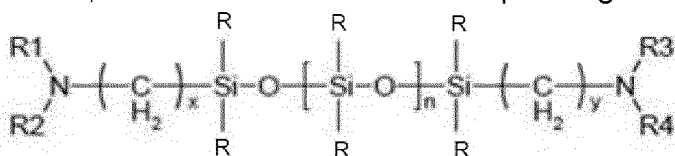
- 5 Other subjects, features, aspects and advantages of the invention will emerge even more clearly on reading the description and the examples.

10 In the present patent application, and unless otherwise indicated, the term “at least one” is equivalent to “one or more”; and the limits of a range of values are included in that range, notably in the expressions “between” and “ranging from ... to ...”.

(i) α,ω -Bis-amino silicones

15 The composition according to the present invention comprises one or more α,ω -bis-amino silicones, i.e. silicones comprising amine end groups; this means that the groups at the end of the chain (the end groups in the α and ω positions) comprise an amine group. The amine group may be a primary, secondary or tertiary amine and also a quaternary ammonium.

20 Preferably, the composition according to the present invention comprises one or more α,ω -bis-amino silicones corresponding to formula (I)



in which:

- the radicals R, independently of each other, represent a hydrogen atom, an OH group or a linear or branched C₁-C₄ alkyl group;
- 25 - the radicals R₁, R₂, R₃ and R₄, independently of each other, represent a hydrogen atom, a C₁-C₆ alkyl group or a C₁-C₆ aminoalkyl group;
- x is between 0 and 6, y is between 0 and 6, and
- n is such that the weight-average molecular mass (M_w) of the amino silicone is between 5000 and 200 000.

30 Preferably, the radicals R are identical and represent CH₃ (methyl).

Preferably, R₁, R₂, R₃ and R₄, independently of each other, represent a hydrogen atom, an alkyl group, preferably a saturated linear C₁-C₄ and better still C₂-C₄ alkyl group, notably ethyl; or a C₂-C₄ aminoalkyl group, notably having the structure -(C_aH_{2a})-NH₂ with a = 2 to 4; in particular aminoethyl (-CH₂-CH₂-NH₂).

35 Preferably, x is between 1 and 5, better still between 2 and 4, even better still x=3. Preferably, y is between 1 and 5, better still between 2 and 4, even better still y=3. Preferably, x=y.

Preferably, n is such that the weight-average molecular mass (M_w) of the silicone is between 10 000 and 150 000 g/mol, or even between 15 000 and 100 000 g/mol.

In a preferred embodiment, the amino silicone corresponds to the formula (I) in which R = methyl, x = y = 3 and R₁ = R₂ = R₃ = R₄ = H; it is then a bis-aminopropyl dimethicone (INCI name).

- 5 The composition comprises a total content of α,ω-bis-amino silicone(s) preferably ranging from 0.05% to 7% by weight, preferentially from 0.075% to 5%, better still from 0.1% to 3% by weight, even better still from 0.2% to 2% by weight, relative to the total weight of the composition.

10 The composition comprises a total content of α,ω-bis-amino silicone(s) of formula (I) preferably ranging from 0.05% to 7% by weight, preferably from 0.075% to 5%, better still from 0.1% to 3% by weight, even better still from 0.2% to 2% by weight, relative to the total weight of the composition.

(ii) Cationic surfactants

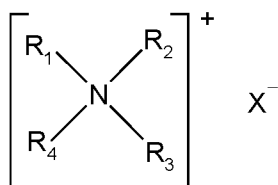
- 15 The composition according to the present invention also comprises one or more cationic surfactants.

They are preferably chosen from primary, secondary or tertiary fatty amines, which are optionally polyoxyalkylenated, or salts thereof, and quaternary ammonium salts, and mixtures thereof.

20

The composition may comprise one or more cationic surfactants chosen, alone or in mixture, from the following compounds which are quaternary ammonium salts:

- the compounds corresponding to the general formula (II) below:



(II)

- 25 in which:

X⁻ is an anion notably chosen from the group of halides, phosphates, acetates, lactates, (C₁-C₄)alkyl sulfates, (C₁-C₄)alkylsulfonates or (C₁-C₄)alkylarylsulfonates; the groups R₁ to R₄, which may be identical or different, represent a linear or branched aliphatic group including from 1 to 30 carbon atoms, or an aromatic group such as aryl or alkylaryl, at least one of the groups R₁ to R₄ denoting a linear or branched aliphatic group including from 8 to 30 carbon atoms, preferably from 12 to 24 carbon atoms.

30 The aliphatic groups may include heteroatoms notably such as oxygen, nitrogen, sulfur and halogens. The aliphatic groups are chosen, for example, from C₁-C₃₀ alkyl, C₁-C₃₀ alkoxy, (C₂-C₆) polyoxyalkylene, C₁-C₃₀ alkylamide, (C₁₂-C₂₂)alkylamido(C₂-C₆)alkyl, (C₁₂-C₂₂)alkyl acetate, and C₁-C₃₀ hydroxyalkyl groups.

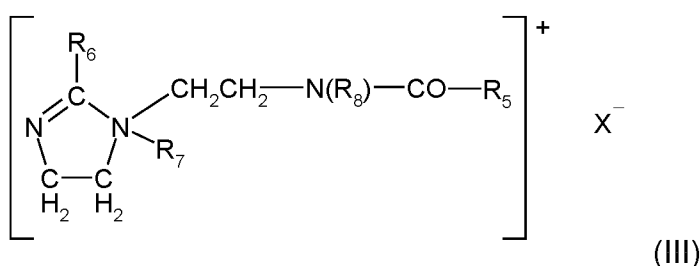
Among the quaternary ammonium salts of formula (II), the ones that are preferred are tetraalkylammonium salts, for instance dialkyldimethylammonium or

alkyltrimethylammonium salts in which the alkyl group comprises from about 12 to 22 carbon atoms, in particular behenyltrimethylammonium, distearyldimethylammonium, cetyltrimethylammonium or benzyldimethylstearylammonium salts, and also palmitylamidopropyltrimethylammonium salts, stearamidopropyltrimethylammonium salts, stearamidopropyldimethylcetearyl-

ammonium salts, or stearamidopropyldimethyl(myristyl acetate)ammonium salts such as those sold under the name Ceraphyl® 70 by the company Van Dyk.

It is preferred in particular to use the chloride, bromide or methyl sulfate salts of these compounds.

- quaternary ammonium salts of imidazoline, such as those of formula (III):

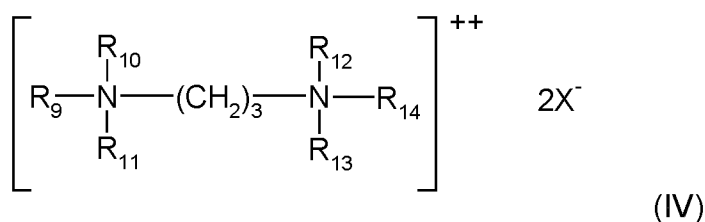


in which R₅ represents an alkenyl or alkyl group including from 8 to 30 carbon atoms, for example derived from tallow fatty acids, R₆ represents a hydrogen atom, a C₁-C₄ alkyl group or an alkenyl or alkyl group including from 8 to 30 carbon atoms, R₇ represents a C₁-C₄ alkyl group, R₈ represents a hydrogen atom or a C₁-C₄ alkyl group and X⁻ is an anion chosen from the group of the halides, phosphates, acetates, lactates, alkyl sulfates, alkylsulfonates or alkylarylsulfonates, the alkyl and aryl groups of which preferably comprise, respectively, from 1 to 20 carbon atoms and from 6 to 30 carbon atoms.

Preferably, R₅ and R₆ denote a mixture of alkenyl or alkyl groups including from 12 to 21 carbon atoms, for example derived from tallow fatty acids, R₇ denotes a methyl group and R₈ denotes a hydrogen atom.

Such a product is sold, for example, under the name Rewoquat® W 75 by the company Rewo,

- quaternary diammonium or triammonium salts, in particular of formula (IV):



in which:

R₉ denotes an alkyl radical including approximately from 16 to 30 carbon atoms, which is optionally hydroxylated and/or optionally interrupted with one or more oxygen atoms,

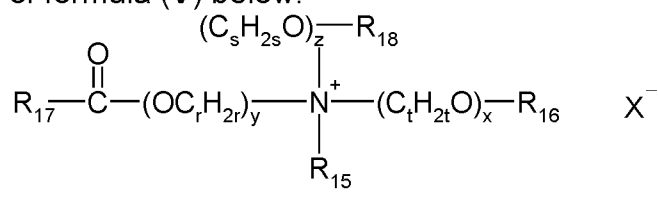
R₁₀ is chosen from hydrogen or an alkyl radical including from 1 to 4 carbon atoms or a group (R_{9a})(R_{10a})(R_{11a})N-(CH₂)₃, with R_{9a}, R_{10a}, R_{11a}, R₁₁, R₁₂, R₁₃ and R₁₄, which may be identical or different, chosen from hydrogen or an alkyl radical including from 1 to 4 carbon atoms, and

- 5 X⁻ is an anion chosen from the group of halides, acetates, phosphates, nitrates, (C₁-C₄)alkyl sulfates, (C₁-C₄)alkylsulfonates and (C₁-C₄)alkylarylsulfonates, in particular methyl sulfate and ethyl sulfate.

Such compounds are, for example, Finquat CT-P, sold by the company Finetex (Quaternium 89), and Finquat CT, sold by the company Finetex (Quaternium 75);

10

- quaternary ammonium salts containing at least one ester function, such as those of formula (V) below:



in which:

- 15 R₁₅ is chosen from C₁-C₆ alkyl groups and C₁-C₆ hydroxyalkyl or dihydroxyalkyl groups;

R₁₆ is chosen from the group R₁₉-C(O)-; groups R₂₀ which are linear or branched, saturated or unsaturated C₁-C₂₂ hydrocarbon-based groups; a hydrogen atom;

- 20 R₁₈ is chosen from the group R₂₁-C(O)-; groups R₂₂ which are linear or branched, saturated or unsaturated C₁-C₆ hydrocarbon-based groups; a hydrogen atom;

R₁₇, R₁₉ and R₂₁, which may be identical or different, are chosen from linear or branched, saturated or unsaturated C₇-C₂₁ hydrocarbon-based groups;

r, s and t, which may be identical or different, are integers having values from 2 to 6;

- 25 y is an integer ranging from 1 to 10;

x and z, which may be identical or different, are integers having a value from 0 to 10;

X⁻ is a simple or complex, organic or mineral anion;

- 30 with the proviso that the sum x + y + z is from 1 to 15, that when x is 0 then R₁₆ denotes R₂₀, and that when z is 0 then R₁₈ denotes R₂₂.

The alkyl groups R₁₅ may be linear or branched, and more particularly linear. Preferably, R₁₅ denotes a methyl, ethyl, hydroxyethyl or dihydroxypropyl group, and more particularly a methyl or ethyl group.

- 35 Advantageously, the sum x + y + z is from 1 to 10.

When R₁₆ is a hydrocarbon-based group R₂₀, it may be long and contain from 12 to 22 carbon atoms, or short and contain from 1 to 3 carbon atoms.

When R₁₈ is a hydrocarbon-based group R₂₂, it preferably contains 1 to 3 carbon atoms.

Advantageously, R_{17} , R_{19} and R_{21} , which may be identical or different, are chosen from linear or branched, saturated or unsaturated C_{11} - C_{21} hydrocarbon-based groups, and more particularly from linear or branched, saturated or unsaturated C_{11} - C_{21} alkyl and alkenyl groups.

5 Preferably, x and z , which may be identical or different, are equal to 0 or 1.

Advantageously, y is equal to 1.

Preferably, r , s and t , which may be identical or different, are equal to 2 or 3, and even more particularly are equal to 2.

10 The anion X^- is preferably a halide (chloride, bromide or iodide) or an alkyl sulfate, more particularly methyl sulfate. However, use may be made of methanesulfonate, phosphate, nitrate, tosylate, an anion derived from an organic acid, such as acetate or lactate, or any other anion that is compatible with the ammonium bearing an ester function. The anion X^- is even more particularly chloride or methyl sulfate.

15 In the composition according to the invention, use may be made more particularly of the ammonium salts of formula (V) in which R_{15} denotes a methyl or ethyl group, x and y are equal to 1; z is equal to 0 or 1; r , s and t are equal to 2;

R_{16} is chosen from the group R_{19} - $C(=O)-$, methyl, ethyl or C_{14} - C_{22} hydrocarbon-based groups, and a hydrogen atom;

20 R_{18} is chosen from the group R_{21} - $C(=O)-$ and a hydrogen atom;

R_{17} , R_{19} and R_{21} , which may be identical or different, are chosen from linear or branched, saturated or unsaturated C_{13} - C_{17} hydrocarbon-based groups, and preferably from linear or branched, saturated or unsaturated C_{13} - C_{17} alkyl and alkenyl groups.

25 Advantageously, the hydrocarbon-based groups are linear.

Mention may be made, for example, of the compounds of formula (V) such as the diacyloxyethyl dimethylammonium, diacyloxyethyl hydroxyethyl methylammonium, monoacyloxyethyl dihydroxyethyl methylammonium, triacyloxyethyl methylammonium and monoacyloxyethyl hydroxyethyl dimethylammonium salts (notably chloride or methyl sulfate), and mixtures thereof. The acyl groups preferably contain 14 to 18 carbon atoms and are derived more particularly from a plant oil such as palm oil or sunflower oil. When the compound contains several acyl groups, these groups may be identical or different.

35 These products are obtained, for example, by direct esterification of triethanolamine, triisopropanolamine, an alkyl diethanolamine or an alkyl diisopropanolamine, which are optionally oxyalkylenated, with C_{10} - C_{30} fatty acids or with mixtures of C_{10} - C_{30} fatty acids of plant or animal origin, or by transesterification of the methyl esters thereof. This esterification is followed by a quaternization using an alkylating agent
40 such as an alkyl halide (preferably a methyl or ethyl halide), a dialkyl sulfate (preferably a methyl or ethyl sulfate), methyl methanesulfonate, methyl para-toluenesulfonate, glycol chlorohydrin or glycerol chlorohydrin.

Such compounds are sold, for example, under the names Dehyquat® by the company Henkel, Stepanquat® by the company Stepan, Noxamium® by the company CECA or Rewoquat® WE 18 by the company Rewo-Witco.

- 5 The composition according to the invention may contain, for example, a mixture of quaternary ammonium monoester, diester and triester salts with a weight majority of diester salts.

Use may also be made of the ammonium salts containing at least one ester function that are described in patents US-A-4 874 554 and US-A-4 137 180.

- 10 Use may be made of behenoylhydroxypropyltrimethylammonium chloride sold by KAO under the name Quatarmin BTC 131.

Preferably, the ammonium salts containing at least one ester function contain two ester functions.

- 15 Among the quaternary ammonium salts containing at least one ester function that may be used, it is preferred to use dipalmitoylethylhydroxyethylmethylammonium salts.

- 20 The term "fatty amine" means a compound comprising at least one optionally (poly)oxyalkylenated primary, secondary or tertiary amine function, or salts thereof and comprising at least one C₆-C₃₀ and preferably C₈-C₃₀ hydrocarbon-based chain. Preferably, the fatty amines that are useful according to the invention are not (poly)oxyalkylenated.

- 25 By way of fatty amines, mention may be made of amidoamines. The amidoamines according to the invention can be chosen from fatty amidoamines, it being possible for the fatty chain to be borne by the amine group or by the amido group.

The term "amidoamine" means a compound comprising at least one amide function and at least one primary, secondary or tertiary amine function.

- 30 The term "fatty amidoamine" means an amidoamine comprising, in general, at least one C₆-C₃₀ hydrocarbon-based chain. Preferably, the fatty amidoamines that are useful according to the invention are not quaternized.

Preferably, the fatty amidoamines that are useful according to the invention are not (poly)oxyalkylenated.

- 35 Among the fatty amidoamines of use according to the invention, mention may be made of the amidoamines of formula (VI) below: $\text{RCONHR}''\text{N(R}')_2$ (VI) in which:

- 40 - R represents a substituted or unsubstituted, linear or branched, saturated or unsaturated monovalent hydrocarbon-based radical containing from 5 to 29 carbon atoms, preferably from 7 to 23 carbon atoms, and in particular a linear or branched C₅-C₂₉ and preferably C₇-C₂₃ alkyl radical, or a linear or branched C₅-C₂₉ and preferably C₇-C₂₃ alkenyl radical;

- R'' represents a divalent hydrocarbon-based radical containing less than 6 carbon atoms, preferably 2 to 4 carbon atoms and better still 3 carbon atoms; and

- R', which may be identical or different, represent a linear or branched, saturated or unsaturated and substituted or unsubstituted monovalent hydrocarbon-based radical containing less than 6 carbon atoms, preferably from 1 to 4 carbon atoms, preferably a methyl radical.

5

The fatty amidoamines of formula (VI) are chosen, for example, from oleamidopropyl dimethylamine, stearamidopropyl dimethylamine, notably the product sold by the company Inolex Chemical Company under the name Lexamine S13, isostearamidopropyl dimethylamine, stearamidoethyl dimethylamine, lauramidopropyl dimethylamine, myristamidopropyl dimethylamine, behenamidopropyl dimethylamine, dilinoleamidopropyl dimethylamine, palmitamidopropyl dimethylamine, ricinoleamidopropyl dimethylamine, soyamidopropyl dimethylamine, avocadoamidopropyl dimethylamine, cocamidopropyl dimethylamine, minkamidopropyl dimethylamine, oatamidopropyl dimethylamine, sesamidopropyl dimethylamine, tallamidopropyl dimethylamine, olivamidopropyl dimethylamine, palmitamidopropyl dimethylamine, stearamidoethyldiethylamine, brassicamidopropyl dimethylamine, and mixtures thereof.

Preferably, the fatty amidoamines are chosen from oleamidopropyl dimethylamine, stearamidopropyl dimethylamine, brassicamidopropyl dimethylamine and mixtures thereof.

The cationic surfactant(s) are preferably chosen from those of formula (II), those of formula (V), and mixtures thereof, and better still from those of formula (II).

Preferentially, the cationic surfactant(s) may be chosen from salts such as chlorides, bromides or methosulfates, of tetraalkylammonium, for instance dialkyldimethylammonium or alkyltrimethylammonium salts in which the alkyl group includes about 12 to 22 carbon atoms, in particular behenyltrimethylammonium, distearyldimethylammonium, cetyltrimethylammonium or benzyldimethylstearyl-ammonium salts; dipalmitoylethylhydroxyethylmethylammonium salts such as dipalmitoylethylhydroxyethylmethylammonium methosulfate; and mixtures thereof. Even more preferentially, they are chosen from cetyltrimethylammonium chloride, behenyltrimethylammonium chloride, dipalmitoylethylhydroxyethylmethylammonium methosulfate, and mixtures thereof.

35

Preferably, the composition according to the invention comprises the cationic surfactant(s) in a total amount ranging from 0.1% to 15% by weight, better still from 0.2% to 10% by weight, preferentially from 0.5% to 8% by weight and even better still from 1% to 6% by weight, relative to the total weight of the composition.

Preferably, the composition according to the invention comprises the cationic surfactant(s) of formula (II) in a total amount ranging from 0.1% to 15% by weight, better still from 0.2% to 10% by weight, preferentially from 0.5% to 8% by weight

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and even better still from 1% to 6% by weight, relative to the total weight of the composition.

(iii) Fatty alcohols

- 5 The composition according to the invention also comprises one or more fatty alcohols.

For the purposes of this invention, the term “fatty alcohol” means an alcohol comprising in its main chain at least one saturated or unsaturated hydrocarbon-based chain, such as linear or branched alkyl or alkenyl, including from 8 to 10 40 carbon atoms, preferably from 10 to 30 carbon atoms and better still from 12 to 24 carbon atoms.

They are neither glycerolated nor polyoxyalkylenated.

- They preferably have the structure R-OH in which R denotes a linear or branched, 15 saturated or unsaturated, notably alkyl or alkenyl, C8-C40, better still C10-C30, preferably C12-C24, hydrocarbon-based group, optionally substituted with one or more hydroxyl groups.

- 20 The fatty alcohols may be liquid or non-liquid (solid) at room temperature (25°C) and at atmospheric pressure (760 mmHg, i.e. 1.013×10^5 Pa).

The liquid fatty alcohols of the invention may be saturated or unsaturated.

The saturated liquid fatty alcohols are preferably branched. They may optionally comprise in their structure at least one aromatic or non-aromatic ring. Preferably, they are acyclic.

- 25 The unsaturated liquid fatty alcohols exhibit, in their structure, at least one double or triple bond, and preferably one or more double bonds. When several double bonds are present, there are preferably 2 or 3 of them, and they may be conjugated or unconjugated. These unsaturated liquid fatty alcohols may be linear or branched. They may optionally comprise in their structure at least one aromatic or non- 30 aromatic ring. Preferably, they are acyclic.

The liquid fatty alcohols preferably have the structure R'-OH, in which R' denotes a branched C₁₂-C₂₄ saturated (alkyl) or linear or branched C₁₂-C₂₄ unsaturated (alkenyl) group, R' possibly being substituted with one or more hydroxyl groups.

- 35 Preferably, the liquid fatty alcohol of the invention is a branched saturated alcohol. Preferably, R' does not contain any hydroxyl groups.

The term “non-liquid” preferably means a solid compound or a compound with a viscosity of greater than 2 Pa.s at 25°C and at a shear rate of 1 s⁻¹.

- 40 The solid fatty alcohols may be chosen more particularly from saturated or unsaturated, linear or branched alcohols including from 8 to 40 carbon atoms, better still from 10 to 30 carbon atoms, preferably from 12 to 24 carbon atoms.

Preferably, the solid fatty alcohols have the structure R''-OH with R'' denoting a saturated linear (alkyl) hydrocarbon-based group, optionally substituted with one or

more hydroxyl groups, comprising from 8 to 40, better still from 10 to 30 or even from 12 to 24 carbon atoms.

The solid fatty alcohols that may be used are preferably chosen from saturated or unsaturated, linear or branched, preferably linear and saturated, (mono)alcohols including from 8 to 40 carbon atoms, better still from 10 to 30 or even from 12 to 24 carbon atoms.

Examples of solid fatty alcohols that may be mentioned include myristyl alcohol, cetyl alcohol, stearyl alcohol and mixtures thereof such as cetylstearyl alcohol.

More particularly, the fatty alcohols are chosen from fatty alcohols that are solid at room temperature (25°C) and under atmospheric pressure (760 mmHg, i.e. 1.013×10^5 Pa), better still from saturated or unsaturated, linear or branched, preferably linear and saturated, solid monoalcohols including from 8 to 40 carbon atoms, better still from 10 to 30, or even from 12 to 24 carbon atoms, even better still from cetyl alcohol, stearyl alcohol and mixtures thereof, such as cetearyl alcohol.

Preferably, the composition according to the invention comprises the fatty alcohol(s) in a total amount ranging from 1% to 20% by weight, better still from 2% to 15% by weight, even better still from 3% to 10% by weight, relative to the total weight of the composition.

Preferably, the composition according to the invention comprises the solid fatty alcohol(s) in a total amount ranging from 1% to 20% by weight, better still from 2% to 15% by weight, even better still from 3% to 10% by weight, relative to the total weight of the composition.

(iv) Fatty esters

The composition according to the present invention comprises one or more esters of carboxylic acid(s) and of alcohol(s) comprising from 8 (inclusive) to 24 (inclusive) carbon atoms.

The number of carbon atoms mentioned above refers to the alcohol used for obtaining the ester, and not to the ester itself.

These esters may be solid or liquid (at 25°C, 1 atm).

The alcohol from which the ester that may be used according to the invention is derived thus comprises from 8 to 24 carbon atoms. Preferably, the alcohol from which the ester that may be used according to the invention is derived is a saturated, linear or branched monoalcohol including from 8 to 24 carbon atoms, preferably from 9 to 22 carbon atoms.

Preferably, the carboxylic acid from which the ester that may be used according to the invention is derived is a saturated, linear or branched carboxylic acid, and includes at least 8 carbon atoms, preferably from 8 to 32 carbon atoms and more

particularly from 9 to 24 carbon atoms. The saturated carboxylic acids may optionally be hydroxylated, and are preferably saturated monocarboxylic acids.

5 Preferably, the esters usable according to the invention are chosen from esters of saturated carboxylic acid(s), preferably monocarboxylic acid(s), comprising at least 8 carbon atoms, preferably from 8 to 32 carbon atoms and more particularly from 9 to 24 carbon atoms; and of saturated monoalcohol(s), comprising from 8 to 24 carbon atoms, preferably from 9 to 22 carbon atoms.

10 Mention may notably be made, alone or as a mixture, of:

- octyldodecyl behenate, isocetyl behenate, cetyl lactate, stearyl octanoate, octyl octanoate, cetyl octanoate, decyl oleate, octyl pelargonate, dioctyl adipate, dioctyl maleate;
- C8-C24 alkyl palmitates such as octyl palmitate, myristyl palmitate, cetyl palmitate, 15 stearyl palmitate;
- C8-C24 alkyl myristates such as cetyl myristate, stearyl myristate and myristyl myristate;
- C8-C24 alkyl stearates such as octyl stearate, myristyl stearate, cetyl stearate, stearyl stearate;
- 20 - C8-C24 alkyl isononanoates such as isononyl isononanoate.

Particularly preferably, the esters according to the invention are chosen from myristyl palmitate, cetyl palmitate, stearyl palmitate; cetyl myristate, stearyl myristate, myristyl myristate; myristyl stearate, cetyl stearate, stearyl stearate; 25 isononyl isononanoate; and mixtures thereof.

Preferably, the composition according to the invention comprises the ester(s) of carboxylic acid(s) and of alcohol(s) comprising from 8 to 24 carbon atoms in a total amount ranging from 0.05% to 15% by weight, better still from 0.1% to 10% by 30 weight, even better still from 0.2% to 8% by weight, even better still from 0.2% to 5% by weight, or even more from 0.3% to 2% by weight, relative to the total weight of the composition.

Preferably, the composition according to the invention comprises the ester(s) chosen from myristyl palmitate, cetyl palmitate, stearyl palmitate; cetyl myristate, 35 stearyl myristate, myristyl myristate, myristyl stearate, cetyl stearate, stearyl stearate, isononyl isononanoate and mixtures thereof, in a total amount ranging from 0.05% to 15% by weight, better still from 0.1% to 10% by weight, even better still from 0.2% to 8% by weight, even better still from 0.2% to 5% by weight, or even from 0.3% to 2% by weight, relative to the total weight of the composition.

Other ingredients

The composition according to the present invention comprises one or more alkanes comprising at least 8 carbon atoms, preferably comprising from 8 to 48 carbon atoms.

5

Mention may be made in particular, alone or as a mixture, of:

(a) linear or branched alkanes containing from 8 to 16 carbon atoms, notably from 10 to 16 carbon atoms, and in particular:

10 - branched C₈-C₁₆ alkanes, such as C₈-C₁₆ and better still C₁₀-C₁₆ isoalkanes notably of petroleum origin (also known as isoparaffins), such as isododecane, isodecane, isohexadecane and, for example, the oils sold under the Isopar or Permethyl trade names, or alternatively hemisqualane (INCI name: C13-C16 Isoparaffin);

15 - linear C₈-C₁₆ and better still C₁₀-C₁₆ alkanes, such as n-dodecane (C₁₂) and n-tetradecane (C₁₄), for instance those sold by Sasol under the references Parafol 12-97 and Parafol 14-97, and also mixtures thereof, undecane and tridecane and also mixtures thereof such as the mixtures of n-undecane (C₁₁) and of n-tridecane (C₁₃) obtained in Examples 1 and 2 of patent application WO 2008/155059 from the company Cognis;

20 (b) linear or branched hydrocarbons of mineral or synthetic origin comprising more than 16 carbon atoms, notably from 16 to 48, better still from 16 to 40, even better still from 18 to 32 carbon atoms, such as petroleum jelly, polydecenes, hydrogenated polyisobutene such as Parleam[®], squalane, perhydrosqualene and liquid paraffins, and mixtures thereof.

25

Preferably, the composition according to the invention comprises one or more branched C₈-C₁₆ and notably C₁₀-C₁₆ alkanes, such as isododecane, isodecane and isohexadecane.

30 Preferably, when they are present, the composition according to the invention comprises the alkane(s) comprising at least 8 carbon atoms in a total amount ranging from 1% to 25% by weight, better still from 5% to 20% by weight and even better still from 10% to 15% by weight, relative to the total weight of the composition.

35 The composition according to the present invention may optionally comprise one or more amino silicones, other than the α,ω -bis-amino silicones (i). These additional amino silicones thus do not comprise any amine end groups.

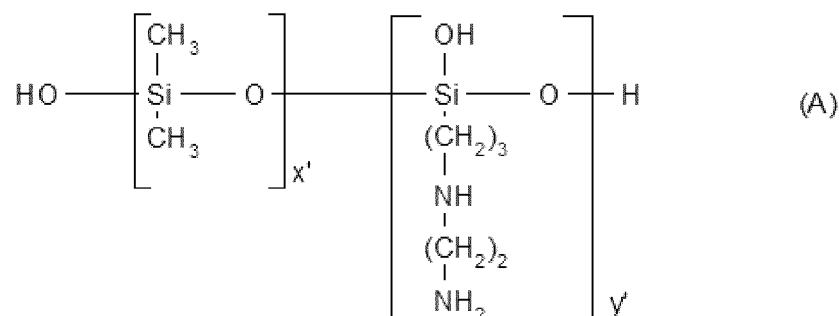
40 The term "amino silicone" denotes any silicone including at least one primary, secondary or tertiary amine or a quaternary ammonium group.

The weight-average molecular masses of these amino silicones may be measured by gel permeation chromatography (GPC) at room temperature (25°C), as polystyrene equivalent. The columns used are μ styragel columns. The eluent is

THF and the flow rate is 1 ml/min. 200 μ l of a 0.5% by weight solution of silicone in THF are injected. Detection is performed by refractometry and UV-metry.

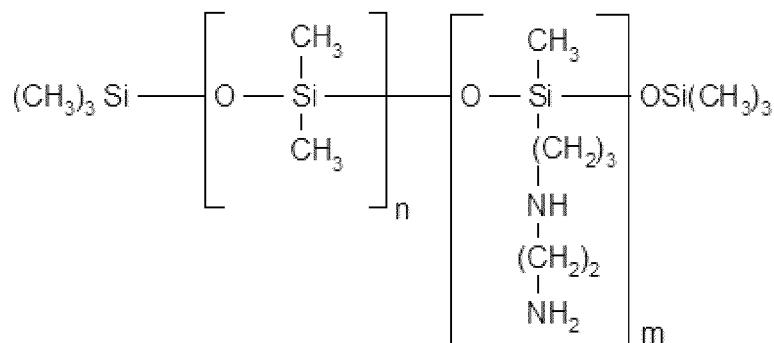
The additional amino silicones may be chosen, alone or as a mixture, from:

- 5 1) the polysiloxanes corresponding to formula (A):



in which x' and y' are integers such that the weight-average molecular weight (Mw) is between 5000 and 500 000 approximately;

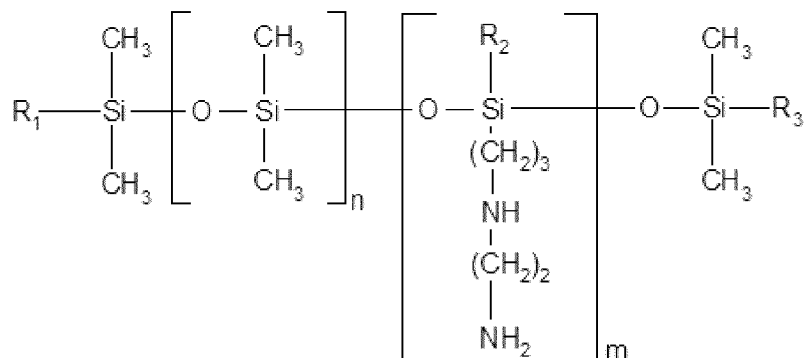
- 10 2) the “trimethylsilyl amodimethicone” silicones corresponding to formula (B):



in which m and n are numbers such that the sum $(n + m)$ ranges from 1 to 2000 and in particular from 50 to 150, n possibly denoting a number from 0 to 1999 and notably from 49 to 149, and m possibly denoting a number from 1 to 2000 and notably from 1 to 10.

15

- 3) the silicones of formula (C) below:



in which:

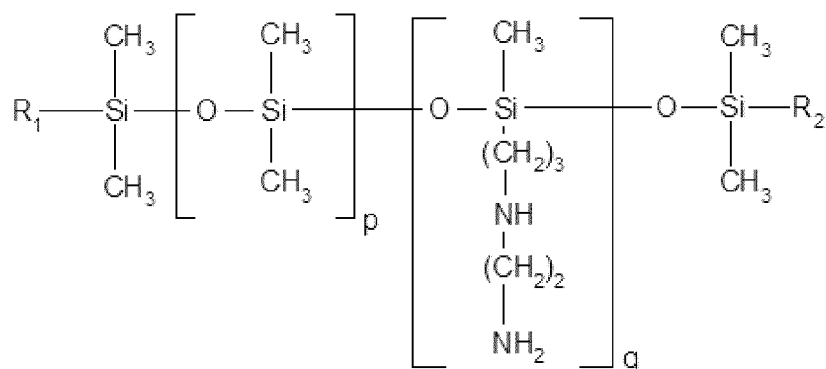
- m and n are numbers such that the sum (n + m) ranges from 1 to 1000, in particular from 50 to 250 and more particularly from 100 to 200; n possibly denoting a number from 0 to 999, notably from 49 to 249 and more particularly from 125 to 175, and m possibly denoting a number from 1 to 1000, notably from 1 to 10 and more particularly from 1 to 5;

- R₁, R₂ and R₃, which may be identical or different, represent a hydroxyl or C₁-C₄ alkoxy radical, at least one of the radicals R₁ to R₃ denoting an alkoxy radical. Preferably, the alkoxy radical is a methoxy radical.

The hydroxy/alkoxy mole ratio preferably ranges from 0.2:1 to 0.4:1 and preferably from 0.25:1 to 0.35:1 and more particularly is equal to 0.3:1.

The weight-average molecular mass (M_w) of these silicones preferably ranges from 2000 to 1 000 000 and more particularly from 3500 to 200 000.

4) the silicones of formula (D) below:



in which:

- p and q are numbers such that the sum (p + q) ranges from 1 to 1000, in particular from 50 to 350 and more particularly from 150 to 250; p possibly denoting a number from 0 to 999, notably from 49 to 349 and more particularly from 159 to 239, and q possibly denoting a number from 1 to 1000, notably from 1 to 10 and more particularly from 1 to 5;

- R₁ and R₂, which are different, represent a hydroxyl or C₁-C₄ alkoxy radical, at least one of the radicals R₁ or R₂ denoting an alkoxy radical.

Preferably, the alkoxy radical is a methoxy radical.

The hydroxy/alkoxy mole ratio generally ranges from 1:0.8 to 1:1.1 and preferably from 1:0.9 to 1:1 and more particularly is equal to 1:0.95.

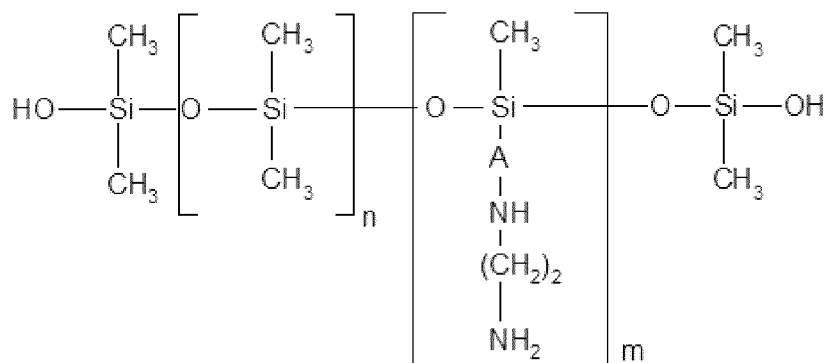
The weight-average molecular mass (M_w) of the silicone preferably ranges from 2000 to 200 000, even more particularly from 5000 to 100 000 and more particularly from 10 000 to 50 000.

A product containing amino silicones of structure (C) is sold by the company Wacker under the name Belsil® ADM 652.

A product containing amino silicones of structure (D) is sold by the company Wacker under the name Fluid WR 1300®.

When these amino silicones are used, one particularly advantageous embodiment consists in using them in the form of an oil-in-water emulsion. The oil-in-water emulsion may comprise one or more surfactants. The surfactants may be of any nature but are preferably cationic and/or nonionic. The number-average size of the silicone particles in the emulsion generally ranges from 3 nm to 500 nm. Preferably, notably in the case of the amino silicones of formula (D), use is made of microemulsions with a mean particle size ranging from 5 nm to 60 nm (limits included) and more particularly from 10 nm to 50 nm (limits included). Thus, use may be made according to the invention of the amino silicone microemulsions of formula (D) sold under the names Finish CT 96 E® or SLM 28020® by the company Wacker.

5) the silicones of formula (E) below:



in which:

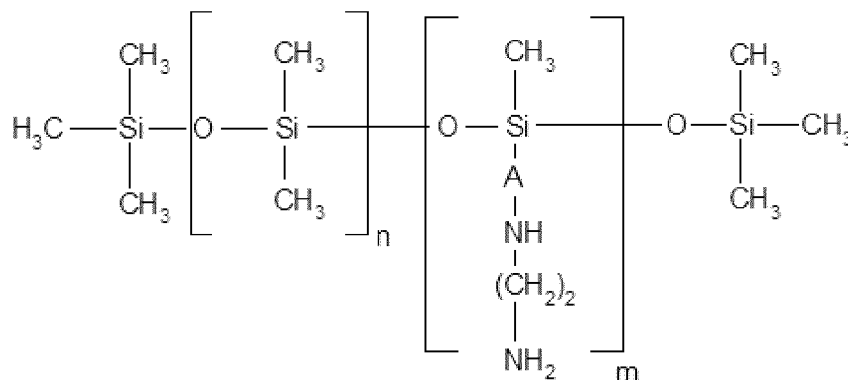
- m and n are numbers such that the sum (n + m) ranges from 1 to 2000 and in particular from 50 to 150, n possibly denoting a number from 0 to 1999 and notably from 49 to 149, and m possibly denoting a number from 1 to 2000 and notably from 1 to 10;

- A denotes a linear or branched alkylene radical containing from 4 to 8 carbon atoms and preferably 4 carbon atoms. This radical is preferably linear.

The weight-average molecular mass (Mw) of these amino silicones preferably ranges from 2000 to 1 000 000 and even more particularly from 3500 to 200 000.

A silicone corresponding to this formula is, for example, Xiameter MEM 8299 Emulsion from Dow Corning.

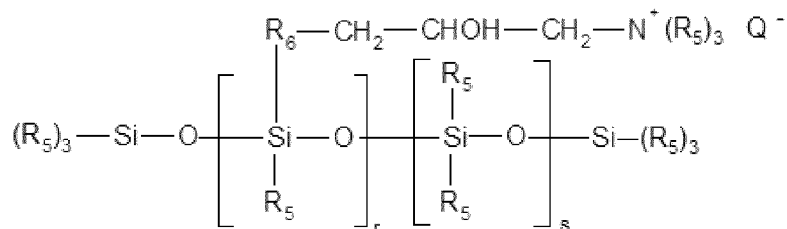
6) the silicones of formula (F) below:



in which:

- m and n are numbers such that the sum (n + m) ranges from 1 to 2000 and in particular from 50 to 150, n possibly denoting a number from 0 to 1999 and notably from 49 to 149, and m possibly denoting a number from 1 to 2000 and notably from 1 to 10;
- A denotes a linear or branched alkylene radical containing from 4 to 8 carbon atoms and preferably 4 carbon atoms. This radical is preferably branched. The weight-average molecular mass (Mw) of these amino silicones preferably ranges from 500 to 1 000 000 and even more particularly from 1000 to 200 000. A silicone corresponding to this formula is, for example, DC2-8566 Amino Fluid from Dow Corning;

7) the amino silicones corresponding to formula (G):



in which:

- R₅ represents a monovalent hydrocarbon-based radical containing from 1 to 18 carbon atoms, and in particular a C₁-C₁₈ alkyl or C₂-C₁₈ alkenyl radical, for example methyl;
 - R₆ represents a divalent hydrocarbon-based radical, notably a C₁-C₁₈ alkylene radical or a divalent C₁-C₁₈, for example C₁-C₈, alkyleneoxy radical linked to the Si via an SiC bond;
 - Q⁻ is an anion such as a halide ion, notably chloride, or an organic acid salt, notably acetate;
 - r represents a mean statistical value ranging from 2 to 20 and in particular from 2 to 8;
 - s represents a mean statistical value ranging from 20 to 200 and in particular from 20 to 50.
- Such amino silicones are notably described in patent US 4 185 087.

Preferably, the additional amino silicones are chosen from the above silicones of formulae A, B, E or F and mixtures thereof, preferentially from the above silicones of formula E and mixtures thereof.

5

Advantageously, the additional amino silicones are present in the composition according to the invention in a total content ranging from 0.05% to 5% by weight, preferentially from 0.1% to 2% by weight, better still from 0.2% to 1% by weight, relative to the total weight of the composition.

10

Advantageously, the additional amino silicones chosen from the above silicones of formulae A, B, E or F and mixtures thereof are present in the composition according to the invention in a total content ranging from 0.05% to 5% by weight, preferentially from 0.1% to 2% by weight, better still from 0.2% to 1% by weight, relative to the total weight of the composition.

15

The compositions according to the invention may comprise water, preferably in a content ranging from 60% to 99% by weight, preferably from 70% to 98% by weight, better still from 75% to 95% by weight, relative to the total weight of the composition.

20

They may also additionally comprise one or more organic solvents notably chosen from linear or branched C₁-C₆ monoalcohols such as ethanol and isopropanol; C₂-C₁₀ polyols and polyol ethers, such as 2-butoxyethanol, propylene glycol (1,2-propanediol), propylene glycol monomethyl ether, diethylene glycol monomethyl ether and monoethyl ether, hexylene glycol; aromatic alcohols such as benzyl alcohol or phenoxyethanol.

25

Preferably, the organic solvents are chosen from C₁-C₄ monoalcohols, notably ethanol and isopropanol; diols such as butane-1,4-diol, butane-1,2-diol, butane-1,3-diol, butane-2,3-diol, propane-1,2-diol (propylene glycol), pentane-1,2-diol, pentane-1,5-diol, pentane-2, 4-diol, pentane-1,3-diol, hexane-1,6-diol, hexane-1,2-diol, hexane-2,5-diol, 2-methyl-2,4-pentanediol (hexylene glycol), diethylene glycol, dipropylene glycol, triethylene glycol; triols such as hexane-1,2,6-triol, glycerol; tetraols such as erythritol; benzyl alcohol; phenoxyethanol; and mixtures thereof.

30

The compositions in accordance with the invention may also comprise various adjuvants conventionally used in compositions for the cosmetic treatment of keratin materials, such as, alone or as a mixture: anionic, amphoteric or nonionic surfactants; organic or mineral thickeners; antioxidants; penetrants; sequestrants; fragrances; dispersants; conditioning agents; film-forming agents; ceramides; preserving agents and opacifiers.

35

Needless to say, those skilled in the art will take care to select this or these optional additional compounds such that the advantageous properties intrinsically associated with the composition in accordance with the invention are not, or are not substantially, adversely affected by the envisioned addition(s).

40

The above adjuvants may generally be present in an amount, for each of them, of between 0.01% and 20% by weight relative to the total weight of each composition containing them.

5 The compositions according to the invention may be presented in various presentation forms, such as a hair conditioner, a mask, a lotion, a foam, a cream, a gel or in any other form that is suitable for performing a cosmetic treatment of keratin materials. They may also be packaged in a propellant-free pump-action bottle or
10 under pressure in an aerosol container in the presence of a propellant and form a foam.

A subject of the present invention is also a cosmetic process for treating keratin materials, in particular human keratin materials, notably keratin fibres such as the hair, comprising the application to said keratin materials, notably keratin fibres, of a
15 composition as defined previously.

The composition according to the invention may be applied to wet or dry keratin materials that have optionally been washed beforehand with a shampoo. Preferably, the composition according to the invention is applied to wet keratin materials or fibres.

20 The composition according to the invention may be applied with a leave-on time that may range from 1 to 15 minutes, preferably from 2 to 10 minutes.

After application of the composition according to the invention, the keratin materials can be rinsed with water, before being dried or left to dry. This is notably the case when the composition is in the form of a rinse-out hair conditioner or a hair mask.

25 However, the rinsing step is not obligatory, since the composition according to the invention may be a leave-on composition (composition not rinsed out), for example a hair lotion or a hair conditioner that is not rinsed out.

30 A subject of the invention is also the use of a composition as defined previously for the cosmetic treatment of keratin materials, notably of keratin fibres, in particular of human keratin fibres such as the hair.

The composition may be used on wet or dry hair, in rinse-out or leave-on mode.

35 The examples that follow serve to illustrate the invention without, however, being limiting in nature.

Example 1

40 The cosmetic composition according to the invention is prepared from the following ingredients (weight percentage of active material AM):

[Table 1]

Ingredients	
Bis-aminopropyl dimethicone	0.26
Isononyl isononanoate	0.45
Cetyl esters	0.85
Cetearyl alcohol	5.1
Behentrimonium chloride	2
Amodimethicone (Xiameter MEM-8299 emulsion)	0.6 AM
Calcium aluminium borosilicate (and) titanium dioxide (Microglas Metashine MT 1040RY)	2.25
Isododecane	12
Preserving agents	qs
Water	qs 100

A composition that can be used as a rinse-out haircare product is obtained.

It provides a good level of care to the hair, notably a smooth, glidant feel, and coating;

5 these effects are uniform from the roots to the end of the hair.

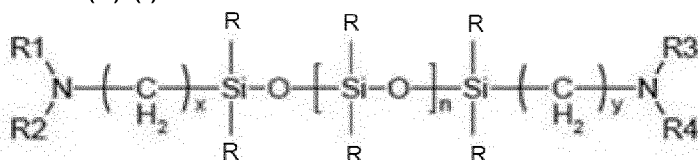
CLAIMS

5

1. Cosmetic composition comprising:

- (i) one or more α,ω -bis-amino silicones,
 (ii) one or more cationic surfactants,
 (iii) one or more fatty alcohols, and
 10 (iv) one or more esters of carboxylic acid(s) and of alcohol(s) comprising from 8 to 24 carbon atoms.

2. Composition according to the preceding claim, in which the α,ω -bis-amino silicone(s) (i) are chosen from silicones of the following formula (I):



15

in which:

- the radicals R, independently of each other, represent a hydrogen atom, an OH group or a linear or branched C1-C4 alkyl group;
- the radicals R₁, R₂, R₃ and R₄, independently of each other, represent a hydrogen atom, a C₁-C₆ alkyl group or a C₁-C₆ aminoalkyl group;
- x is between 0 and 6; y is between 0 and 6, and n is such that the weight-average molecular weight (M_w) of the amino silicone is between 5000 and 200 000; preferably chosen from the silicones of formula (I) in which:
- the radicals R are identical and represent CH₃ (methyl), and/or
- 25 - R₁, R₂, R₃ and R₄, independently of each other, represent a hydrogen atom, an alkyl group, preferably a saturated linear C₂-C₄ alkyl group, or a C₂-C₄ aminoalkyl group, notably having the structure -(C_aH_{2a})-NH₂ with a = 2 to 4; in particular aminoethyl (-CH₂-CH₂-NH₂), and/or
- x is between 1 and 5, better still between 2 and 4 and even better still x = 3, and/or
- 30 - y is between 1 and 5, better still between 2 and 4 and even better still y = 3; preferentially chosen from the amino silicones of formula (I) in which R = methyl, x = y = 3 and R₁ = R₂ = R₃ = R₄ = H.

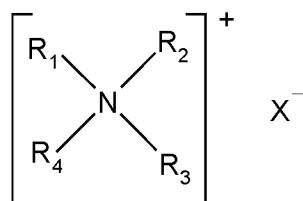
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3. Composition according to either of the preceding claims, comprising a total content of α,ω -bis-amino silicone(s) ranging from 0.05% to 7% by weight, preferentially from 0.075% to 5%, better still from 0.1% to 3% by weight, even better still from 0.2% to 2% by weight, relative to the total weight of the composition.

40

4. Composition according to any one of the preceding claims, comprising one or more cationic surfactants chosen, alone or as a mixture, from:

(i) the compounds corresponding to the general formula (II) below:

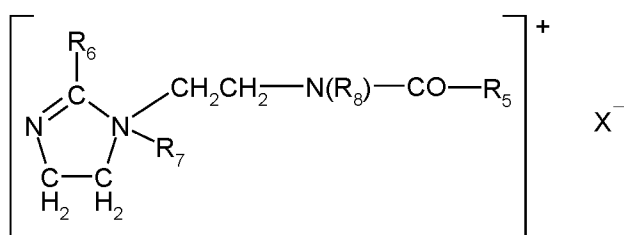


(II)

in which:

- X^- is an anion notably chosen from the group of halides, phosphates, acetates, lactates, (C₁-C₄)alkyl sulfates, (C₁-C₄)alkylsulfonates or (C₁-C₄)alkylarylsulfonates; the groups R₁ to R₄, which may be identical or different, represent a linear or branched aliphatic group including from 1 to 30 carbon atoms, or an aromatic group such as aryl or alkylaryl, at least one of the groups R₁ to R₄ denoting a linear or branched aliphatic group including from 8 to 30 carbon atoms and preferably from 12 to 24 carbon atoms, the aliphatic groups possibly including heteroatoms notably such as oxygen, nitrogen, sulfur and halogens.

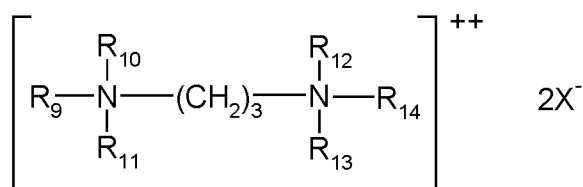
(ii) quaternary ammonium salts of imidazoline, such as those of formula (III):



(III)

- in which R₅ represents an alkenyl or alkyl group comprising from 8 to 30 carbon atoms, for example derived from tallow fatty acids, R₆ represents a hydrogen atom, a C₁-C₄ alkyl group or an alkenyl or alkyl group comprising from 8 to 30 carbon atoms, R₇ represents a C₁-C₄ alkyl group, R₈ represents a hydrogen atom or a C₁-C₄ alkyl group and X^- is an anion chosen from the group of the halides, phosphates, acetates, lactates, alkyl sulfates, alkylsulfonates or alkylarylsulfonates, the alkyl and aryl groups of which preferably comprise, respectively, from 1 to 20 carbon atoms and from 6 to 30 carbon atoms.

(iii) quaternary diammonium or triammonium salts, in particular of formula (IV):



(IV)

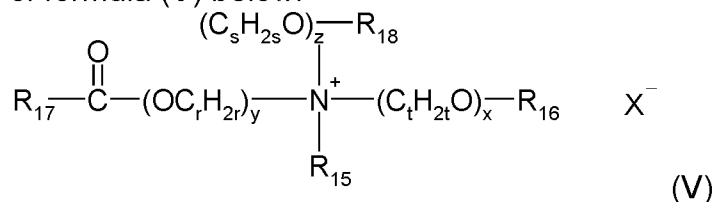
in which:

R₉ denotes an alkyl radical including approximately from 16 to 30 carbon atoms, which is optionally hydroxylated and/or optionally interrupted with one or more oxygen atoms,

R₁₀ is chosen from hydrogen or an alkyl radical including from 1 to 4 carbon atoms or a group (R_{9a})(R_{10a})(R_{11a})N-(CH₂)₃, with R_{9a}, R_{10a}, R_{11a}, R₁₁, R₁₂, R₁₃ and R₁₄, which may be identical or different, chosen from hydrogen or an alkyl radical including from 1 to 4 carbon atoms, and

- 5 X⁻ is an anion chosen from the group of halides, acetates, phosphates, nitrates, (C₁-C₄)alkyl sulfates, (C₁-C₄)alkylsulfonates and (C₁-C₄)alkylarylsulfonates, in particular methyl sulfate and ethyl sulfate.

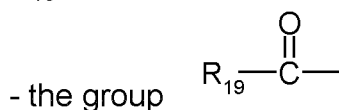
- 10 (iv) quaternary ammonium salts containing at least one ester function, such as those of formula (V) below:



in which:

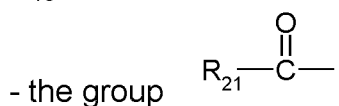
R₁₅ is chosen from C₁-C₆ alkyl groups and C₁-C₆ hydroxyalkyl or dihydroxyalkyl groups;

- 15 R₁₆ is chosen from:



- the groups R₂₀, which are linear or branched, saturated or unsaturated C₁-C₂₂ hydrocarbon-based groups,
- a hydrogen atom,

- 20 R₁₈ is chosen from:



- the groups R₂₂, which are linear or branched, saturated or unsaturated C₁-C₆ hydrocarbon-based groups,
- a hydrogen atom,

- 25 R₁₇, R₁₉ and R₂₁, which may be identical or different, are chosen from linear or branched, saturated or unsaturated C₇-C₂₁ hydrocarbon-based groups;

r, s and t, which may be identical or different, are integers having values from 2 to 6;

y is an integer ranging from 1 to 10;

- 30 x and z, which may be identical or different, are integers having a value from 0 to 10;

X⁻ is a simple or complex, organic or mineral anion;

with the proviso that the sum x + y + z is from 1 to 15, that when x is 0 then R₁₆ denotes R₂₀, and that when z is 0 then R₁₈ denotes R₂₂.

35

(v) the fatty amidoamines of formula (VI) below: RCONHR''N(R')₂ (VI)

in which:

- R represents a substituted or unsubstituted, linear or branched, saturated or unsaturated monovalent hydrocarbon-based radical containing from 5 to 29 carbon atoms, preferably from 7 to 23 carbon atoms, and in particular a linear or branched C₅-C₂₉ and preferably C₇-C₂₃ alkyl radical, or a linear or branched C₅-C₂₉ and preferably C₇-C₂₃ alkenyl radical;
- R'' represents a divalent hydrocarbon-based radical containing less than 6 carbon atoms, preferably 2 to 4 carbon atoms and better still 3 carbon atoms; and
- R', which may be identical or different, represent a linear or branched, saturated or unsaturated and substituted or unsubstituted monovalent hydrocarbon-based radical containing less than 6 carbon atoms, preferably from 1 to 4 carbon atoms, preferably a methyl radical;
- preferably chosen from the cationic surfactants of formula (II), those of formula (V), and mixtures thereof, and better still from those of formula (II).
5. Composition according to any one of the preceding claims, comprising the cationic surfactant(s) in a total amount ranging from 0.1% to 15% by weight, better still from 0.2% to 10% by weight, preferentially from 0.5% to 8% by weight and even better still from 1% to 6% by weight, relative to the total weight of the composition.
6. Composition according to any one of the preceding claims, comprising one or more fatty alcohols of formula R-OH with R denoting a linear or branched, saturated or unsaturated hydrocarbon-based group, notably a C₈-C₄₀, better still C₁₀-C₃₀, preferably C₁₂-C₂₄ alkyl or alkenyl, optionally substituted with one or more hydroxyl groups; better still, one or more solid fatty alcohols of formula R''-OH with R'' denoting a saturated linear hydrocarbon-based (alkyl) group, optionally substituted with one or more hydroxyl groups, comprising from 8 to 40, better still from 10 to 30, or even from 12 to 24 carbon atoms.
7. Composition according to any one of the preceding claims, comprising the fatty alcohol(s) in a total amount ranging from 1% to 20% by weight, better still from 2% to 15% by weight and even better still from 3% to 10% by weight, relative to the total weight of the composition.
8. Composition according to any one of the preceding claims, comprising one or more esters of carboxylic acid(s), preferably saturated monocarboxylic acid(s), comprising at least 8 carbon atoms, preferably from 8 to 32 carbon atoms and more particularly from 9 to 24 carbon atoms; and of saturated monoalcohols comprising from 8 to 24 carbon atoms, preferably from 9 to 22 carbon atoms; preferably chosen, alone or as a mixture, from
- octyldodecyl behenate, isocetyl behenate, cetyl lactate, stearyl octanoate, octyl octanoate, cetyl octanoate, decyl oleate, octyl pelargonate, dioctyl adipate, dioctyl maleate;

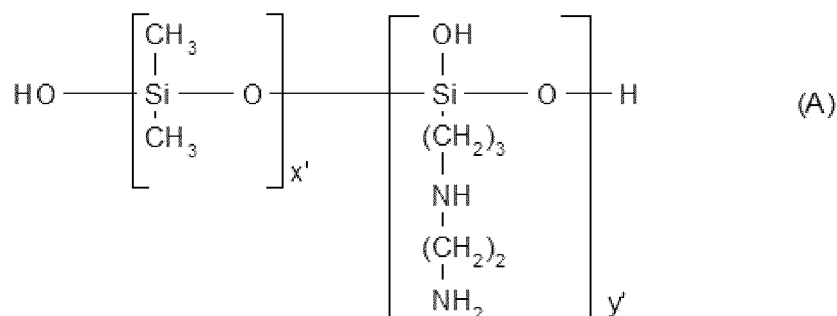
- C8-C24 alkyl palmitates such as octyl palmitate, myristyl palmitate, cetyl palmitate, stearyl palmitate;
- C8-C24 alkyl myristates such as cetyl myristate, stearyl myristate and myristyl myristate;
- 5 - C8-C24 alkyl stearates such as octyl stearate, myristyl stearate, cetyl stearate, stearyl stearate;
- C8-C24 alkyl isononanoates such as isononyl isononanoate.

9. Composition according to any one of the preceding claims, comprising the ester(s) of carboxylic acid(s) and of alcohol(s) comprising from 8 to 24 carbon atoms in a total amount ranging from 0.05% to 15% by weight, better still from 0.1% to 10% by weight, even better still from 0.2% to 8% by weight, even better still from 0.2% to 5% by weight, or even more from 0.3% to 2% by weight, relative to the total weight of the composition.

10. Composition according to any of the preceding claims, comprising one or more alkanes comprising at least 8 carbon atoms, preferably comprising from 8 to 48 carbon atoms; better still one or more branched C8-C16 alkanes, notably C10-C16 alkanes, such as isododecane, isodecane and isohexadecane.

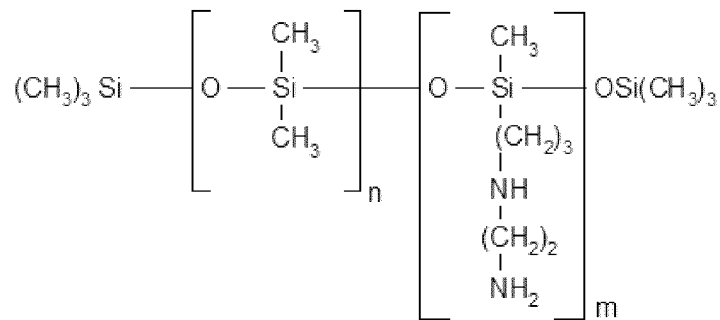
11. Composition according to any one of the preceding claims, comprising one or more amino silicones, other than the α,ω -bis-amino silicones (i); preferably chosen, alone or as a mixture, from:

1) the polysiloxanes corresponding to formula (A):



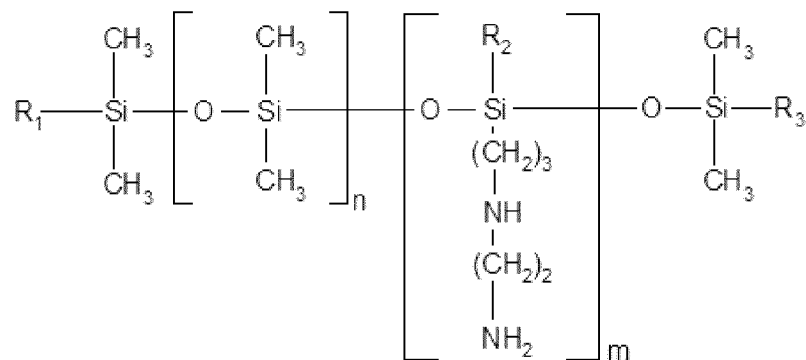
25 in which x' and y' are integers such that the weight-average molecular weight (Mw) is between 5000 and 500 000 approximately;

2) the “trimethylsilyl amodimethicone” silicones corresponding to formula (B):



in which m and n are numbers such that the sum (n + m) ranges from 1 to 2000 and in particular from 50 to 150, n possibly denoting a number from 0 to 1999 and notably from 49 to 149, and m possibly denoting a number from 1 to 2000 and notably from 1 to 10.

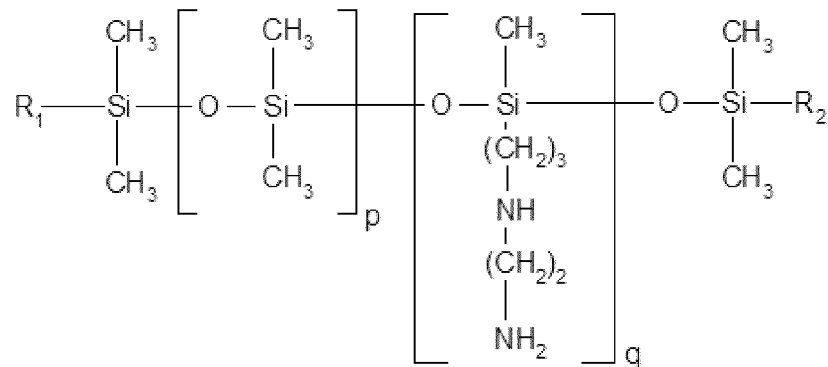
3) the silicones of formula (C) below:



in which:

- m and n are numbers such that the sum (n + m) ranges from 1 to 1000, in particular from 50 to 250 and more particularly from 100 to 200; n possibly denoting a number from 0 to 999, notably from 49 to 249 and more particularly from 125 to 175, and m possibly denoting a number from 1 to 1000, notably from 1 to 10 and more particularly from 1 to 5;
- R₁, R₂ and R₃, which may be identical or different, represent a hydroxyl or C₁-C₄ alkoxy radical, at least one of the radicals R₁ to R₃ denoting an alkoxy radical.

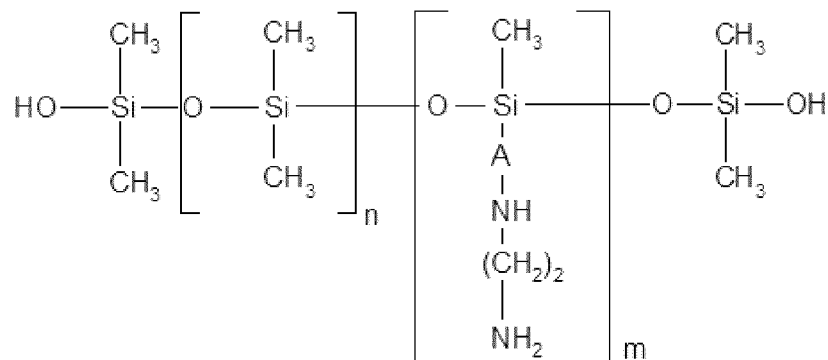
4) the silicones of formula (D) below:



in which:

- p and q are numbers such that the sum (p + q) ranges from 1 to 1000, in particular from 50 to 350 and more particularly from 150 to 250; p possibly denoting a number from 0 to 999, notably from 49 to 349 and more particularly from 159 to 239, and q possibly denoting a number from 1 to 1000, notably from 1 to 10 and more particularly from 1 to 5;
- R₁ and R₂, which are different, represent a hydroxyl or C₁-C₄ alkoxy radical, at least one of the radicals R₁ or R₂ denoting an alkoxy radical.

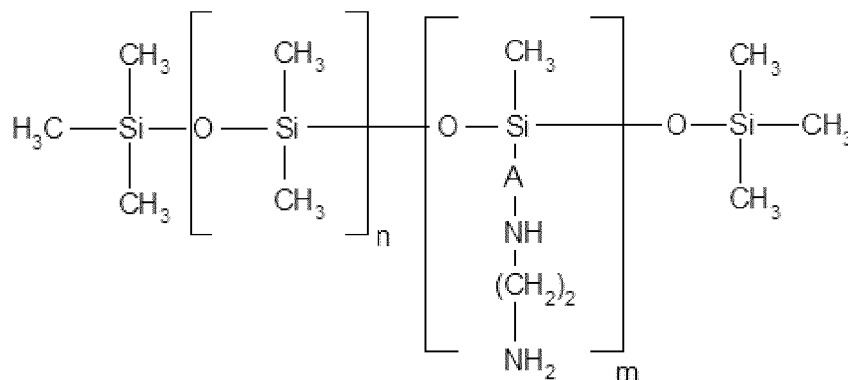
5) the silicones of formula (E) below:



in which:

- m and n are numbers such that the sum (n + m) ranges from 1 to 2000 and in particular from 50 to 150, n possibly denoting a number from 0 to 1999 and notably from 49 to 149, and m possibly denoting a number from 1 to 2000 and notably from 1 to 10;
- A denotes a linear or branched alkylene radical containing from 4 to 8 carbon atoms and preferably 4 carbon atoms.

6) the silicones of formula (F) below:

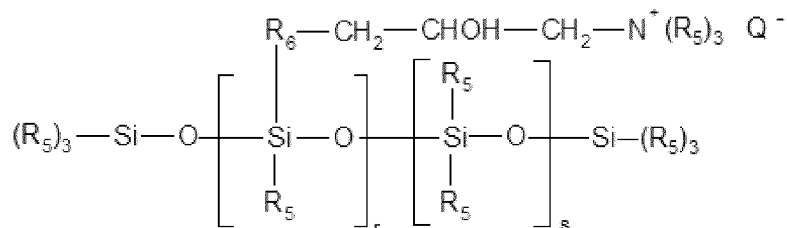


in which:

- m and n are numbers such that the sum (n + m) ranges from 1 to 2000 and in particular from 50 to 150, n possibly denoting a number from 0 to 1999 and notably from 49 to 149, and m possibly denoting a number from 1 to 2000 and notably from 1 to 10;
- A denotes a linear or branched alkylene radical containing from 4 to 8 carbon atoms and preferably 4 carbon atoms.

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7) the amino silicones corresponding to formula (G):



in which:

- R₅ represents a monovalent hydrocarbon-based radical containing from 1 to 18 carbon atoms, and in particular a C₁-C₁₈ alkyl or C₂-C₁₈ alkenyl radical, for example methyl;
 - R₆ represents a divalent hydrocarbon-based radical, notably a C₁-C₁₈ alkylene radical or a divalent C₁-C₁₈, for example C₁-C₈, alkyleneoxy radical linked to the Si via an SiC bond;
 - Q⁻ is an anion such as a halide ion, notably chloride, or an organic acid salt, notably acetate;
 - r represents a mean statistical value ranging from 2 to 20 and in particular from 2 to 8;
 - s represents a mean statistical value ranging from 20 to 200 and in particular from 20 to 50;
- preferably said additional amino silicones being chosen from the above silicones of formulae A, B, E or F and mixtures thereof, preferentially from the above silicones of formula E and mixtures thereof.

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12. Composition according to any one of the preceding claims, comprising water, preferably in a content ranging from 60% to 99% by weight, preferably from 70% to 98% by weight and better still from 75% to 95% by weight, relative to the total weight of the composition.

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13. Cosmetic process for treating keratin materials, in particular keratin fibres, notably human keratin fibres such as the hair, comprising the application to said keratin materials of a composition according to any one of the preceding claims.

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14. Use of a composition as defined according to one of Claims 1 to 12, for the cosmetic treatment of keratin materials, notably of keratin fibres, in particular human keratin fibres such as the hair.

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2022/084021

A. CLASSIFICATION OF SUBJECT MATTER INV. A61K8/34 A61K8/37 A61K8/41 A61K8/898 A61Q5/02 A61Q5/12 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, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE GNPD [Online] MINTEL; 14 October 2021 (2021-10-14), anonymous: "Smoothing Anti-Frizz Treatment", XP055946531, Database accession no. 9074648 the whole document -----	1, 2, 4, 6, 8, 10, 13, 14
Y	the whole document -----	1-14
X	DATABASE GNPD [Online] MINTEL; 26 July 2021 (2021-07-26), anonymous: "Moisturizing Hair Mask", XP055946536, Database accession no. 8892195 the whole document ----- -/--	1, 2, 4, 6, 8, 10, 13, 14
☒ 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		
Date of the actual completion of the international search 25 January 2023		Date of mailing of the international search report 02/02/2023
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 Heller, Dorothee

INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2022/084021

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 GNPD [Online] MINTEL; 21 July 2021 (2021-07-21), anonymous: "Glossing Repairing Hair Mask", XP055946540, Database accession no. 8878943	1, 2, 4, 6, 8, 10, 13, 14
Y	the whole document -----	1-14
X	CN 106 562 914 A (LIN ZHENHUI) 19 April 2017 (2017-04-19)	1, 2, 4-10, 13, 14
Y	paragraph [0001]; claims; examples -----	1-14
Y	WO 2018/098542 A1 (OREAL [FR]; CONTRERAS CARLOS GRANADOS [BR]) 7 June 2018 (2018-06-07) page 1, paragraph 1 page 3, paragraph 2 page 7, paragraph 4 page 8, paragraph 2 page 17, paragraph 1; claims; examples -----	1-14
Y	WO 2020/257889 A1 (OREAL [FR]; GUIMARAES JOAO PAULO DUARTE [BR]) 30 December 2020 (2020-12-30) page 1, line 3 - line 5 page 2, line 9 - line 23 page 3, line 23 - line 30 page 3, line 31 - page 4, line 2 page 12, line 3 - page 19, line 6 page 19, line 7 - page 20, line 30 page 22, line 29ff page 26, line 10ff; claims; examples -----	1-14
Y	US 2021/369579 A1 (LIANG JUN [US] ET AL) 2 December 2021 (2021-12-02) paragraphs [0002], [0016], [0018], [0021], [0046] - [0060], [0071], [0072], [0075], [0076], [0078] - [0169]; claims; examples -----	1-14

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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WO 2018098542 A1	07-06-2018	BR 112019008430 A2 WO 2018098542 A1	09-07-2019 07-06-2018
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