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(54) Title: COSMETIC COMPOSITION FOR KERATIN FIBERS COMPRISING A FATTY ACID ESTER

(57) Abstract: The present invention relates to a composition comprising (1) at least one ester of a polyol and of fatty acid(s), said fatty acid(s) having a number of carbon atoms greater than or equal to 20, (2) at least one fatty acid having from 14 carbon atoms to less than 20 carbon atoms, (3) at least one inorganic base capable of at least partially neutralizing said fatty acid (2), (4) at least one fatty alcohol preferably chosen from C14-C30 fatty alcohols, (5) at least one non-silicone polymeric gelling agent comprising hydrogen bonds, and (6) water.



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## Description

### COSMETIC COMPOSITION FOR KERATIN FIBERS COMPRISING A FATTY ACID ESTER

The present invention relates to the field of caring for and/or making up keratin materials, and is directed towards proposing compositions more particularly intended for making up the eyelashes or the eyebrows.

The term "keratin materials" is preferably intended to mean human keratin materials, especially keratin fibers.

The term "keratin fibers" is in particular intended to mean the eyelashes and/or the eyebrows, and preferably the eyelashes. For the purposes of the present invention, this term "keratin fibers" also extends to synthetic false eyelashes.

## Technical field

In general, compositions intended for making up keratin fibers, for example the eyelashes, aim to densify the thickness and the visual perception of the eyelashes and ultimately the gaze. These mascaras are described as aqueous or cream mascaras, when they are formulated in an aqueous base, and anhydrous mascaras when they are formulated as a dispersion in an organic solvent medium.

A great diversity of cosmetic effects may be afforded by applying a mascara to keratin fibers and notably the eyelashes, for instance a volumising, lengthening, thickening and more particularly charging makeup effect.

These effects are mostly adjusted through the amount and nature of the particles and most particularly those of the waxes present in the mascaras. In general, mascaras in fact have a significant amount of wax(es) and notably from 10% to 35% by weight of wax(es), more generally from 15% to 30% by weight, relative to the total weight thereof.

For obvious reasons, improving the textures of mascara which condition the manifestation of one or more makeup effects is a constant preoccupation of cosmetic formulators. Moreover, the specific effects associated with a particular formulation, for example charging and moreover providing excellent separation of the eyelashes made up, are expected to be reproduced virtually identically by all the production batches of one and the same formulation.

In order to meet these expectations and/or objectives, it is therefore necessary to be capable of precisely adjusting the texture of a mascara and of reproducing it as faithfully

as possible with batches that are not necessarily produced at the same time but which are identical in terms of ingredients and must therefore provide makeup effects that are in theory also identical.

## 5 Prior Art

However, as specified above, most of the mascaras currently available are formulated with a significant amount of waxes. In point of fact, as detailed in the document Ullmann's Encyclopedia of Industrial Chemistry 2015, Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim 10.1002/14356007.a28.pub2, most waxes are not constituted of a single  
10 chemical compound, but are instead complex mixtures. They may be mixtures of oligomers and/or of polymers which, in many cases, also have varied molar masses, varied molar mass distributions and also varied degrees of branching. Thus, a polar wax is conventionally made up of a mixture of alkanes, fatty alcohols and fatty esters, the fatty-chain length of which varies according to the melting point.

15 It is therefore very difficult for the producers of these waxes to guarantee a rigorously identical composition for all production batches. More specifically, there may be, between several production batches of one and the same wax, a variability in terms of the chemical nature of some of its constituent compounds. Likewise, the proportionality of some of its constituent compounds may also vary between production batches.

20 For obvious reasons, these variabilities have a not insignificant impact on the properties of the wax and therefore on those of the mascara incorporating this wax in significant amount. Thus, two mascara formulations of identical composition and therefore produced from one and the same conventional wax in the same amount, can nevertheless diverge in terms of rheological properties and therefore of texture, if they were produced  
25 from two separate production batches of this wax.

## Presentation of the invention

Consequently, the use of conventional waxes, in particular in significant amount, in mascara compositions does not make it possible to guarantee for users the reproduction  
30 of finely adjusted and totally identical rheological properties in all the mascara specimens of one and the same composition.

The present invention aims precisely to provide mascara compositions which have dispensed with this limitation.

Thus, a first objective of the present invention is to obtain mascara compositions of which the texturing properties are finely adjustable and reproducible.

5 Another objective of the present invention is to provide a mascara architecture produced using a predominant weight proportion of single-component ingredients. The predominant use of single-component ingredients advantageously makes it possible to dispense with the risk of composition variability that may exist between several production batches of a multicomponent ingredient and therefore to dispense with the risk of its impact  
10 on the final properties of the mascara.

Another objective of the present invention is to provide a mascara architecture which makes it possible to significantly reduce or even dispense with the use of waxes, but which nevertheless remains very satisfactory in terms of makeup effect.

Thus, another objective of the invention is to provide consumers with  
15 compositions, especially cosmetic compositions, and in particular mascaras, that are compatible with a long playtime while at the same time making it possible to preserve the separation of the eyelashes.

Another objective of the invention is to also provide consumers with compositions which have a creamy texture.

20 Finally, an objective of the invention is to meet, for the most part, the above-mentioned subjects while at the same time providing the composition with great stability.

The term “stable composition” is intended to mean that the composition remains usable as makeup after storage for two months at a temperature of 45°C and that it retains its pleasantness and its sensory signature on application. More specifically, a “stable  
25 composition” according to the invention has an acceptable change in viscosity, that is to say that the difference between the initial viscosity and the viscosity after storage for two months at a temperature of 45°C remains a less than 10 Pa.s.

Unexpectedly, the inventors have noted that it is possible to significantly or even totally dispense with waxes as texturing agent in formulations for making up and/or caring  
30 for keratin fibers and therefore with the limitations mentioned above, with the proviso of combining very specific compounds in such formulations.

### Summary of the invention

Thus, according to a first of its aspects, the present invention relates to a composition, preferably a cosmetic composition, for caring for and/or making up keratin materials, in particular the eyelashes and/or the eyebrows, comprising:

- 5 (1) at least one ester of a polyol and of fatty acid(s), said fatty acid(s) having a number of carbon atoms greater than or equal to 20,
- (2) at least one fatty acid having from 14 carbon atoms to less than 20 carbon atoms,
- (3) at least one inorganic base, capable of at least partially neutralizing said fatty acid (2), in particular chosen from alkali metal hydroxides,
- 10 (4) at least one fatty alcohol preferably chosen from C<sub>14</sub>-C<sub>30</sub> fatty alcohols, better still chosen from the linear and saturated C<sub>14</sub>-C<sub>24</sub>, even better still C<sub>14</sub>-C<sub>20</sub>, fatty alcohols,
- (5) at least one non-silicone polymeric agent comprising hydrogen bonds, and
- (6) water.

Unexpectedly, the inventors have in fact noted that the formulation in an aqueous  
15 medium of at least one ester of a polyol and of fatty acid(s) (1), in combination with at least one neutralized form of a fatty acid having from 14 carbon atoms to less than 20 carbon atoms, at least one non-silicone polymeric gelling agent comprising hydrogen bonds (5) and at least one fatty alcohol (4), makes it possible to obtain compositions of which the texture can be finely adjusted and guaranteed in terms of reproducibility.

20 As emerges from what follows, these new compositions are advantageous in several respects.

First of all, the compounds (1) to (5) required according to the invention are of synthetic origin and, in this respect, of increased purity compared for example with a natural wax.

25 They are also, as individualized compounds, single-component compounds or compounds with a very precise number of components, as opposed to the majority of conventional waxes which are often multicomponent, or even have an indefinite number of compounds, such as natural waxes and some synthetic waxes.

These two specificities are particularly advantageous since they make it possible  
30 to dispense with a risk of variability with regard to their respective compositions.

As emerges from the examples below, the compositions in accordance with the invention and based on the use of the compounds (1) to (5) as texturing agent prove to be very satisfactory in terms of makeup effects.

Thus, compositions according to the invention may have a creamy texture which  
5 proves to be finely adjustable by virtue of the use of the required combination according to the invention.

The obtaining of these properties is conditioned by the use of the compounds (1) to (5) and advantageously does not therefore require the additional presence of waxes, in particular in significant amount.

10 Thus, the compositions according to the invention advantageously comprise less than 5% of waxes as defined below.

The term “wax” is intended to mean lipophilic compounds, which are solid at ambient temperature (20°C) and at atmospheric pressure (760 mmHg), with a reversible solid/liquid change of state, which have a melting point of greater than or equal to 40°C,  
15 which may range up to 120°C.

For the purposes of the invention, the waxes to which this abovementioned amount limitation relates are distinct from those capable of being embodied by the component which is an ester of polyol and of fatty acid(s) (1) and fatty alcohol (4) required according to the invention.

20 Finally, the manifestation of the makeup effects provided by the combination of the compounds (1) to (5) is not acquired to the detriment of the stability of the compositions.

According to another of its aspects, the present invention relates to a process, in particular a cosmetic process, for caring for and/or making up keratin materials, in particular the eyelashes and/or the eyebrows, comprising at least one step consisting in applying, to  
25 said keratin materials, in particular the eyelashes and/or eyebrows, a composition in accordance with the invention.

## Detailed description

### ESTER OF A POLYOL AND OF FATTY ACID(S) (1)

30 As stated above, a composition according to the invention comprises at least one ester of a polyol and of fatty acid(s) (1), said fatty acid(s) having a number of carbon atoms greater than or equal to 20.

The composition according to the invention may comprise at least 5.0% by weight, preferably at least 6.0% by weight, better still at least 7.0% by weight of ester(s) of a polyol and of fatty acid(s) relative to the total weight of the invention.

According to one particularly preferred embodiment of the invention, the ester(s) of a polyol and of fatty acid(s) are present in the composition in a content ranging from 6.0% to 35.0% by weight, preferably from 7.0% to 30.0%, or even preferably from 8.0% to 28.0% by weight, relative to the total weight of the composition.

For the purposes of the invention, the term "ester of a polyol and of fatty acid(s)" comprises both monoesters and polyesters of polyol and of fatty acid(s).

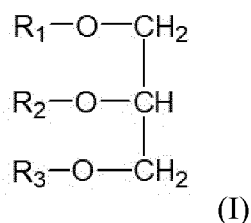
The composition according to the invention may comprise a single ester of a polyol and of fatty acid(s) (1) or several esters of a polyol and of fatty acid(s) (1).

If several esters are present, they may be added separately during the preparation of the composition and the mixture thereof may then be formed *in situ*. They may also be used in the form of a mixture that is already commercially available and in which the weight proportion and the degree of purity of each of the esters are controlled. In other words, the composition of these mixtures is faithfully reproducible, as opposed to mixtures of esters of a polyol and of fatty acid(s) generated *via* an esterification process in which the distribution of the fatty chains of the initial reagents results in a mixture of multiple ester compounds, the composition of which is complex; such as for example, KESTERWAX K82P which is under the INCI name SYNTHETIC BEESWAX.

In particular, the ester of a polyol and of fatty acid(s) is chosen from esters of glycerol and of fatty acid(s).

Thus, the esters of glycerol and of fatty acid(s) according to the invention correspond to formula (I) below:

[Chem 1]



wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> can represent, independently of one another, a hydrogen atom H or a saturated or unsaturated, linear or branched acyl radical having a number of carbon atoms greater than or equal to 20, at least one of R<sub>1</sub>, R<sub>2</sub> and/or R<sub>3</sub> representing a saturated or

unsaturated, linear or branched acyl radical having a number of carbon atoms greater than or equal to 20.

According to one preferred embodiment of the invention, the acyl radicals representing respectively  $R_1$ ,  $R_2$  and  $R_3$  are chosen in such a way that the compound of formula (I) is solid at a temperature of less than or equal to 30°C.

In one preferred embodiment, the esters of glycerol and of fatty acid(s) according to the invention have a melting point greater than 50°C.

The melting point may be measured by any known method and in particular using a differential scanning calorimeter (DSC).

In one preferred embodiment of the invention, when  $R_1$ ,  $R_2$  and/or  $R_3$  represent, independently of one another, acyl radicals, these acyl radicals are linear.

In one preferred embodiment of the invention, when  $R_1$ ,  $R_2$  and/or  $R_3$  represent, independently of one another, acyl radicals, these acyl radicals are saturated.

According to one particularly preferred embodiment of the invention, when  $R_1$ ,  $R_2$  and/or  $R_3$  represent, independently of one another, acyl radicals, these acyl radicals are linear and saturated.

In one preferred embodiment of the invention, when  $R_1$ ,  $R_2$  and/or  $R_3$  represent, independently of one another, acyl radicals, these acyl radicals are identical.

According to one preferred embodiment of the invention, when  $R_1$ ,  $R_2$  and/or  $R_3$  represent, independently of one another, acyl radicals, these radicals have a number of carbon atoms ranging from 20 to 30, preferably from 20 to 24.

In particular,  $R_1$ ,  $R_2$  and/or  $R_3$  are chosen from arachidyl or behenyl, better still behenyl.

Preferably, when  $R_1$ ,  $R_2$  and/or  $R_3$  represent, independently of one another, acyl radicals, these radicals are behenyl radicals.

According to one particularly preferred embodiment of the invention, the ester(s) of a polyol and of fatty acid(s) (1) is (are) chosen from a triester of glycerol and of fatty acid(s) and a mixture of a mono-, a di- or a triester of glycerol and of fatty acid(s) or mixtures thereof.

In particular, the ester of a polyol and of fatty acid(s) is chosen from the triester of glycerol and of a behenic acid (or tribehenin) and a mixture of mono-, di- and triesters of glycerol and of behenic acid(s), better still it is tribehenin.

The mono-, di- and triesters of glycerol and of behenic acid(s) are also found under the names glyceryl behenate, glyceryl dibehenate and glyceryl tribehenate (or tribehenin), respectively.

A triester of glycerol and of behenic acid that may be suitable for the invention is for example the product sold under the name Synchrowax HRC-PA-(MH) sold by the company Croda.

A mixture of mono-, di- and triesters of glycerol and of behenic acid(s) that may be suitable for the invention is, for example, Compritol 888 CG ATO sold by the company Gattefosse.

### **IONIC SURFACTANT**

As specified above, the ester(s) of a polyol and of fatty acid(s) (1) used according to the invention are combined with at least one ionic surfactant resulting from the neutralization of a fatty acid (2) comprising from 14 to less than 20 carbon atoms by an inorganic base (3).

More specifically, the ionic surfactant in question according to the invention results from the at least partial neutralization of the carboxylic functions of a fatty acid (2) comprising from 14 to less than 20 carbon atoms by an inorganic base (3).

### **FATTY ACID (2)**

The fatty acid according to the invention comprises from 14 to less than 20 carbon atoms.

According to one preferred embodiment of the invention, the fatty acid comprises from 16 to less than 20 carbon atoms.

According to one particularly preferred embodiment, the number of carbon atoms of the fatty acid ranges from 16 to 18.

In particular, the fatty acid(s) according to the invention is (are) chosen from linear fatty acids, saturated fatty acids and mixtures thereof.

According to one particularly advantageous embodiment of the invention, the fatty acid of the ionic surfactant is chosen from linear and saturated fatty acids.

According to one particular embodiment of the invention, the fatty acid(s) is (are) chosen from palmitic acid, stearic acid and mixtures thereof, and preferably comprises at least stearic acid, having the INCI name STEARIC ACID

5 According to one particularly preferred embodiment of the invention, the composition uses, as fatty acid (2), a mixture of C<sub>16</sub>-C<sub>18</sub> fatty acids, preferably a mixture of fatty acids having 16 carbon atoms, such as palmitic acid, and of fatty acids having 18 carbon atoms, such as stearic acid.

A preferred stearic acid suitable for the invention is, for example, Stearic Acid 1850 sold by the company Southern Acids.

10 A composition according to the invention may comprise at least 3.0% by weight, in particular from 3.5% to 20.0% by weight, preferably from 4.0% to 20.0% by weight, better still from 4.5% to 15.0% by weight, even better still from 5.0% to 15.0% by total weight of fatty acid (2), in particular of stearic acid, relative to the total weight of the composition.

As mentioned above, this fatty acid is used in an ionic form generated via its  
15 interaction with an inorganic base. This base is used at an amount sufficient to be capable of at least partially neutralizing at least one fatty acid (2).

### **INORGANIC BASE (3)**

20 The composition according to the invention comprises at least one inorganic base.

The inorganic base is chosen from alkali metal hydroxides, in particular from sodium hydroxide and/or potassium hydroxide, and preferably is at least sodium hydroxide.

According to one implementation variant, the composition is devoid of organic base.

25 The amount of inorganic base is adjusted so as to obtain sufficient neutralization to confer an effective ionicity on the associated fatty acid (2).

Preferably, the inorganic base is present in an amount sufficient to neutralize some or all of the carboxylic functions of the fatty acid(s) (2) comprising from 14 to less than 20 carbon atoms. In one preferred embodiment, the amount of base is such that it is  
30 capable of neutralizing all the acid functions of the fatty acid (2).

For example, the composition according to the invention may comprise at least 0.1% by weight, better still at least 0.15% by total weight of inorganic base(s) (3), in particular of sodium hydroxide, relative to the total weight of the composition.

According to one preferred embodiment of the invention, the composition  
5 according to the invention may comprise from 0.2% to 3.0% by weight, preferably from 0.3% to 2.0% by total weight of inorganic base(s) (3), in particular of sodium hydroxide, relative to the total weight of the composition according to the invention.

According to one particular embodiment of the invention, an ionic surfactant results from the total neutralization of stearic acid by sodium hydroxide.

10 The fatty acid (2) and the inorganic base (3) making up the neutralized ionic surfactant according to the invention can be introduced into the composition in the form of one and the same commercial material, or one after the other in the form of two distinct commercial materials. Preferably, the fatty acid (2) and the inorganic base (3) will be introduced into the composition in the form of two distinct commercial materials.

15

#### **FATTY ALCOHOL (4)**

The compositions according to the invention also comprise at least one fatty alcohol. A composition can therefore comprise a single fatty alcohol according to the invention or several distinct fatty alcohols.

20 If several distinct fatty alcohols are present, they can be added separately during the preparation of the composition and the mixture thereof can then be formed in situ. They can also be used in the form of a mixture which is already commercially available and in which the weight proportion and the degree of purity of each of the fatty alcohols are controlled. In other words, the composition of these mixtures is faithfully reproducible, as  
25 opposed to mixtures of fatty alcohols generated via synthesis from starting materials derived from complex mixtures.

The fatty alcohol(s) is (are) in particular chosen from linear or branched, saturated or unsaturated C<sub>14</sub>-C<sub>30</sub>, preferably C<sub>14</sub>-C<sub>24</sub>, and even better still C<sub>14</sub>-C<sub>20</sub>, fatty alcohols.

30 The fatty alcohol(s) is (are) in particular chosen from linear and saturated C<sub>14</sub>-C<sub>30</sub> fatty alcohols, preferably linear and saturated C<sub>14</sub>-C<sub>24</sub> fatty alcohols, and better still linear and saturated C<sub>14</sub>-C<sub>20</sub> fatty alcohols.

According to one particularly preferred embodiment, the fatty alcohol is in the form of a mixture of several different fatty alcohols, and preferably is a mixture of several linear and saturated C<sub>14</sub>-C<sub>30</sub>, better still C<sub>14</sub>-C<sub>24</sub>, even better still C<sub>14</sub>-C<sub>20</sub>, fatty alcohols.

Preferably, the fatty alcohol according to the invention is chosen from (C<sub>16</sub>) cetyl alcohol, (C<sub>18</sub>) stearyl alcohol and mixtures thereof (also known as “cetearyl alcohol”).

Preferentially, the fatty alcohol according to the invention is a mixture of cetyl alcohol and stearyl alcohol. Such a mixture is in particular sold under the name Lannette O OR/MB by the company BASF.

According to one preferred embodiment, the fatty alcohol is solid at ambient temperature.

Preferably, the fatty alcohol(s) (4) is(are) present in the compositions of the invention in amounts ranging from 1.0% to 20.0% by weight relative to the total weight of the composition, preferably from 2.0% to 15.0% by weight, and even more particularly from 3.0% to 10.0% by weight, relative to the total weight of the composition.

#### **NON-SILICONE POLYMERIC GELLING AGENTS COMPRISING HYDROGEN BONDS (5)**

As mentioned hereinabove, a composition according to the invention comprises at least one non-silicon polymeric gelling agent comprising hydrogen bonds.

For the purposes of the present invention, the term “*non-silicone*” is intended to specify that the polymer does not contain a silicon atom.

As representatives of non-silicone polymeric gelling agents comprising hydrogen bonds that are suitable for the invention, mention may be made most particularly of polyamides, better still hydrocarbon-based polyamides.

The term “*hydrocarbon-based polyamide*” is intended to mean a polyamide formed essentially of, or even constituted of, carbon atoms, hydrogen atoms, oxygen atoms and nitrogen atoms, and not containing a silicon or fluorine atom, the compound having at least 2 repeating amide units, preferably at least 3 repeating amide units, and even better still 10 repeating amide units. It may contain alcohol, ester, ether, carboxylic acid, amine and/or amide groups.

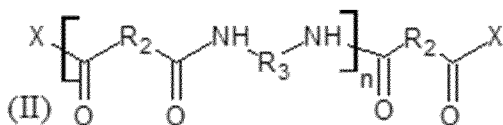
Advantageously, a polyamide that is suitable for the invention has a weight-average molecular weight of less than 100 000 g/mol, especially ranging from 1000 to

100 000 g/mol, in particular less than 50 000 g/mol, especially ranging from 1000 to 50 000 g/mol, and more particularly ranging from 1000 to 30 000 g/mol, preferably from 2000 to 20 000 g/mol, and better still from 2000 to 10 000 g/mol.

This polyamide is preferably insoluble in water, especially at 25°C.

5 According to a first embodiment of the invention, the polyamide used is a polyamide of formula (II):

[Chem 2]



10 wherein X represents a group  $-N(R_1)_2$  or a group  $-OR_1$  with each  $R_1$  being a linear or branched  $C_8$  to  $C_{22}$  alkyl radical and possibly being identical or different,  $R_2$  is a  $C_{28}$ - $C_{42}$  diacid dimer residue,  $R_3$  is an ethylenediamine radical and  $n$  ranges from 2 to 5; and mixtures thereof.

15 According to a first variant, the polyamide used is a polyamide of formula (II) with an amide end group, in which X represents a group  $-N(R_1)_2$  with each  $R_1$  being a linear or branched  $C_8$  to  $C_{22}$  alkyl radical which may be identical or different,  $R_2$  is a  $C_{28}$ - $C_{42}$  diacid dimer residue,  $R_3$  is an ethylenediamine radical and  $n$  ranges from 2 to 5.

20 According to a second variant, the hydrocarbon-based polyamide used is a polyamide with an ester end group of formula (II) in which X represents a group  $-OR_1$  with each  $R_1$  being a linear or branched  $C_8$  to  $C_{22}$ , preferably  $C_{16}$  to  $C_{22}$ , alkyl radical which may be identical or different,  $R_2$  is a  $C_{28}$ - $C_{42}$  diacid dimer residue,  $R_3$  is an ethylenediamine radical and  $n$  ranges from 2 to 5.

25 As representatives of these polyamides with an ester end group, mention may in particular be made of the commercial products sold by the company Arizona Chemical under the names Uniclear 80 and Uniclear 100 or else Uniclear 80 V, Uniclear 100 V and Uniclear 100 VG, or the company Croda under the name OLEOCRAFT, the INCI name of which is ethylenediamine/stearyl dimer dilinoleate copolymer.

According to one preferred variant, a composition according to the invention advantageously comprises at least one hydrocarbon-based polyamide with an ester end group.

30 Advantageously, a composition according to the invention comprises at least one non-silicone polymeric gelling agent comprising hydrogen bonds, preferably a polyamide,

in particular an ethylenediamine/stearyl dimer dilinoleate copolymer, having the INCI name ethylenediamine/stearyl dimer dilinoleate copolymer.

Of course, a composition according to the invention may comprise one or more polymeric gelling agents comprising hydrogen bonds.

5 In particular, it may comprise a mixture of polyamides such as those described above.

In one preferred embodiment, a composition according to the invention comprises at least 2.0% by weight, and preferably from 3.0% to 20.0% by weight, better still from 4.0% to 15.0% by weight, or even from 5.0% to 15.0% by total weight of non-silicone  
10 polymeric gelling agent(s) comprising hydrogen bonds (5), in particular of ethylenediamine/stearyl dimer dilinoleate copolymer, having the INCI name ethylenediamine/stearyl dimer dilinoleate copolymer, relative to the total weight of the composition.

#### 15 **WATER (6)**

A composition according to the invention comprises water.

In particular, a composition according to the invention comprises at least 30.0% by weight, better still at least 40.0% by weight, or even a content of from 50% to 60% by weight of water, relative to the total weight of the composition.

20 In one preferred embodiment of the invention, the composition according to the invention comprises:

- (1) at least one triester of glycerol and of C<sub>20</sub>-C<sub>24</sub> fatty acid(s),
- (2) at least one fatty acid chosen from stearic acid, palmitic acid and mixtures thereof,
- (3) at least one alkali metal hydroxide,
- 25 (4) at least one linear and saturated fatty alcohol chosen from those which are C<sub>14</sub>-C<sub>20</sub>,
- (5) at least one non-silicone polymeric gelling agent comprising hydrogen bonds and chosen from polyamides, and
- (6) water.

In another particularly preferred embodiment, the composition according to the  
30 invention comprises:

- (1) at least one triester of glycerol and of C<sub>20</sub>-C<sub>24</sub> fatty acid(s),
- (2) at least stearic acid as fatty acid,

- (3) at least one alkali metal hydroxide,
- (4) at least a mixture of cetyl and stearyl alcohol as fatty alcohol,
- (5) at least the ethylenediamine/stearyl dimer dilinoleate copolymer as non-silicone polymeric gelling agent comprising hydrogen bonds, and
- 5 (6) water.

In yet another particularly preferred embodiment, the composition according to the invention comprises:

- (1) at least tribehenin as triester of glycerol and of C<sub>20</sub>-C<sub>24</sub> fatty acid(s),
- (2) at least one fatty acid chosen from stearic acid, palmitic acid and mixtures thereof,
- 10 (3) at least one alkali metal hydroxide,
- (4) at least a mixture of cetyl and stearic alcohol as fatty alcohol,
- (5) at least ethylenediamine/stearyl dimer dilinoleate copolymer as non-silicone polymeric gelling agent comprising hydrogen bonds, and
- (6) water.

15 In yet another particularly preferred embodiment, the composition according to the invention comprises:

- (1) at least tribehenin as triester of glycerol and of C<sub>20</sub>-C<sub>24</sub> fatty acid(s),
- (2) at least stearic acid as fatty acid,
- (3) at least one alkali metal hydroxide,
- 20 (4) at least linear and saturated fatty alcohol chosen from those which are C<sub>14</sub>-C<sub>20</sub>,
- (5) at least ethylene/stearyl dimer copolymer as non-silicone polymeric gelling agent comprising hydrogen bonds, and
- (6) water.

25 In yet another particularly preferred embodiment, the composition according to the invention comprises:

- (1) at least tribehenin as triester of glycerol and of C<sub>20</sub>-C<sub>24</sub> fatty acid(s),
- (2) at least stearic acid as fatty acid,
- (3) at least one alkali metal hydroxide,
- (4) at least a mixture of cetyl and stearic alcohol as fatty alcohol,
- 30 (5) at least one non-silicone polymeric gelling agent comprising hydrogen bonds and chosen from polyamides, and
- (6) water.

In yet another particularly preferred embodiment, the composition according to the invention comprises:

- (1) at least tribehenin as triester of glycerol and of C<sub>20</sub>-C<sub>24</sub> fatty acid(s),
- (2) at least stearic acid as fatty acid,
- 5 (3) at least sodium hydroxide,
- (4) at least a mixture of cetyl and stearic alcohol as fatty alcohol,
- (5) at least one non-silicone polymeric gelling agent comprising hydrogen bonds and chosen from polyamides, and
- 6) water.

10 In yet another particularly preferred embodiment, the composition according to the invention comprises:

- (1) at least tribehenin as triester of glycerol and of C<sub>20</sub>-C<sub>24</sub> fatty acid(s),
- (2) at least stearic acid as fatty acid,
- (3) at least sodium hydroxide,
- 15 (4) at least a mixture of cetyl and stearic alcohol as fatty alcohol,
- (5) at least ethylenediamine/stearyl dimer dilinoleate copolymer as non-silicone polymeric gelling agent comprising hydrogen bonds, and
- (6) water.

## 20 **OTHER COMPONENTS**

In addition to the abovementioned compounds, a composition according to the invention may of course comprise secondary ingredients.

### a) **Waxes**

25 Thus, a composition according to the invention may also comprise a wax.

However, with regard to the objectives targeted by the present invention, the compositions according to the invention preferably comprise a reduced amount of wax and in particular less than 5% by weight, or even less than 3% by weight of waxes, relative to the total weight of said waxes.

30 As specified in the preamble, for the purposes of the invention, the term “waxes” is intended to mean lipophilic compounds, which are solid at ambient temperature (20°C)

and at atmospheric pressure (760 mmHg), with a reversible solid/liquid change of state, which have a melting point of greater than or equal to 40°C, which may range up to 120°C.

It is recalled that, for the purposes of the invention, the waxes to which the abovementioned amount limitation relates are distinct from those capable of being embodied by the component which is an ester of a polyol and of fatty acid(s) (1) and/or the fatty alcohol (4) component required according to the invention.

This limitation relates more particularly to waxes made up of complex mixtures which are in particular described in the document Ullmann's Encyclopedia of Industrial Chemistry 2015, Wiley-VCH Verlag GmbH & Co. KGaA.

Such waxes may in particular be natural, but may also be synthetic.

The term “natural” wax is intended to denote any wax which preexists naturally or which can be converted, extracted or purified from natural compounds which exist naturally.

Among natural waxes, mention may in particular be made of waxes termed fossil waxes, including those of petroleum origin, such as ozokerite, pyropissite, macrocrystalline waxes, also known as paraffins – including crude or gatsch waxes, gatsch raffinates, de-oiled gatsch, soft waxes, semi-refined waxes, filtered waxes, refined waxes – and microcrystalline waxes, termed microwaxes, including bright stock gatsch. The fossil waxes also contain lignite, also known as montan wax, or peat wax.

As natural waxes other than fossil waxes, mention may be made of animal and plant waxes.

As examples of plant waxes, mention may be made of carnauba wax, candelilla wax, ouricury wax, sugarcane wax, jojob waxa, *Trithrinax campestris* wax, raffia wax, alfalfa wax, wax extracted from Douglas fir, sisal wax, flax wax, cotton wax, Batavia dammar wax, cereal wax, tea wax, coffee wax, rice wax, palm wax, Japan wax, mixtures thereof and derivatives thereof.

As examples of animal waxes, mention may be made of beeswax, Ghedda wax, shellac, Chinese wax, lanolin, also known as wool wax, mixtures thereof and derivatives thereof.

These waxes are generally multicomponent. For example, natural beeswax is composed of approximately 70% of esters for the majority of monoesters (of fatty acid and of fatty alcohol), but also of hydroxy esters, of diesters and triesters and esters of sterols, and

also of long-chain linear hydrocarbons, of free acids and of free alcohols. For obvious reasons, the weight portion of their ingredients and their degree of purity are difficult to guarantee from one production batch to another.

The term “synthetic” wax is intended to denote waxes of which the synthesis  
5 requires one or more chemical reactions carried out by a human being.

Among the synthetic waxes, semi-synthetic waxes and totally synthetic waxes can be distinguished. Synthetic waxes may be waxes obtained by means of a Fischer-Tropsch process, constituted for example of paraffins with a number of carbon atoms ranging from 20 to 50 or waxes of polyolefins, for example homopolymers or copolymers of  
10 ethylene, of propene or butene, or even longer-chain  $\alpha$ -olefins. The latter can be obtained by thermomechanical degradation of polyethylene plastic, by the Ziegler process, by high-pressure processes, or else via processes catalyzed by metallocene species. These waxes may be crystallizable, partially crystallizable or amorphous. The abovementioned synthetic waxes are generally non-polar and can be chemically treated to obtain polar waxes, for  
15 example by one or more of the following reactions: air oxidation, grafting, esterification, neutralization by metal soaps, amidation, direct copolymerizations or addition reactions.

Again in that case, their composition may be constituted of a mixture of ingredients since the fatty-chain lengths are not well defined, thus forming a mixture of compounds having different fatty-chain lengths and for which it is difficult for  
20 manufacturers to guarantee perfect reproducibility from one production batch to another.

Consequently, the compositions according to the invention advantageously comprise less than 5% by weight, preferably less than 3% by weight of waxes, in particular of multicomponent natural or synthetic wax, relative to the total weight of the composition.

For the purposes of the invention, a multicomponent wax denotes a wax  
25 constituted of a mixture of several ingredients, either such that it exists naturally like natural waxes, or such that it is formed during the process of industrial synthesis of these materials.

In one particularly preferred embodiment of the invention, the composition is free of these waxes, in particular multicomponent natural or synthetic wax.

As specified above, the preferred texturing compounds according to the  
30 invention are by contrast and advantageously synthetic, single-component compounds, which are thus available in a form purified to more than 99%, like the compound (1) required according to the invention.

**b) Other surfactants**

The composition according to the invention can comprise surfactants other than that formed by the neutralization of a fatty acid having from 14 carbon atoms to less than 20 carbon atoms (2) by the inorganic base (3), as co-surfactants.

However, according to one preferred embodiment of the invention, the composition comprises less than 5.0% by weight, preferably less than 2.0% by weight, relative to the total weight of the composition, of non-ionic surfactants, and in particular of non-ionic surfactants with an HLB, measured at 25°C, of greater than or equal to 7.

The term “HLB” (Hydrophilic Lipophilic Balance) is well known to those skilled in the art, and denotes the hydrophilic-lipophilic balance of a surfactant determined at 25°C in the Griffin sense. The term "hydrophilic-lipophilic balance (HLB)" is intended to mean the equilibrium between the size and the strength of the hydrophilic group and the size and the strength of the lipophilic group of the surfactant. The HLB value according to Griffin is defined in J. Soc. Cosm. Chem. 1954 (volume 5), pages 249-256.

In one particularly preferred embodiment of the invention, the composition is free of non-ionic surfactants with an HLB of greater than or equal to 7.

**c) Hydrophilic film-forming polymer(s)**

A composition according to the invention may preferably comprise at least one hydrophilic film-forming polymer.

For the purposes of the present invention, the term “hydrophilic polymer” is intended to mean a water-soluble polymer.

For the purposes of the present invention, the term "water-soluble polymer" is intended to mean a polymer which, when introduced into water at a concentration equal to 1%, gives a macroscopically homogeneous solution of which the light transmittance, at a wavelength equal to 500 nm, through a sample 1 cm thick, is at least 10%.

For the purposes of the present invention, the term “film-forming polymer” is intended to mean a polymer that is capable, by itself or in the presence of an auxiliary film-forming agent, of forming a macroscopically continuous deposit, and preferably a cohesive deposit, and even better still a deposit of which the cohesion and mechanical properties are such that said deposit can be isolatable and manipulated individually, for example when said

deposit is prepared by pouring onto a non-stick surface such as a Teflon-coated or silicone-coated surface.

For the purposes of the invention, a hydrophilic film-forming polymer that is particularly advantageous is a (poly)vinylpyrrolidone hydrophilic polymer.

5 A (poly)vinylpyrrolidone hydrophilic polymer suitable for the invention may have a weight-average molecular weight,  $M_w$ , ranging from 1500 to 500 000 g/mol.

Preferably, a composition according to the invention comprises at least one hydrophilic (poly)vinylpyrrolidone polymer.

10 In particular, a composition according to the invention comprises a total solids content of (poly)vinylpyrrolidone hydrophilic polymer(s) of greater than or equal to 0.5% by weight, preferably greater than or equal to 1.0% by weight, more preferentially greater than or equal to 1.5% by weight, relative to the total weight of the composition.

The composition according to the invention preferably comprises from 0.1% to 15.0% by weight, preferably from 0.5% to 10.0% by weight, better still from 1.0% to 8.0%  
15 by weight of hydrophilic film-forming polymer(s), relative to the total weight of the composition.

Preferably, the (poly)vinylpyrrolidone hydrophilic polymer(s) in accordance with the invention is (are) linear.

20 In particular, the (poly)vinylpyrrolidone hydrophilic polymer(s) in accordance with the invention is (are) chosen from random polymers, block copolymers, and a mixture thereof. The term "block copolymer" is intended to mean a polymer comprising at least two different blocks and preferably at least three different blocks.

The (poly)vinylpyrrolidone hydrophilic polymer(s) is (are) chosen from:

- (poly)vinylpyrrolidone homopolymers;
- 25 - copolymers of (poly)vinylpyrrolidone / (poly)vinyl acetate, esters,
- copolymers of (poly)vinylpyrrolidone / (meth)acrylic, salts thereof, thereof and mixtures thereof.

As (poly)vinylpyrrolidone homopolymers, mention may for example be made of:

- 30 - the polyvinylpyrrolidone (2500 g/mol) sold under the trade name Kollidon 17 PF by the company BASF,

- the polyvinylpyrrolidone sold under the trade name Luviskol K 30 Powder by the company BASF or else sold under the trade name PVP K 30L by the company ISP (Ashland),
- the polyvinylpyrrolidone sold under the trade name PVP K 90 by the company ISP (Ashland).

5           As (poly)vinylpyrrolidone / (poly)vinyl acetate copolymers, mention may for example be made of the vinylpyrrolidone / vinyl acetate (60/40) copolymer sold under the trade name Luviskol VA 64 Powder by the company BASF.

#### **d) Liquid fatty phase**

10           A composition according to the invention may also comprise a liquid fatty phase. Such a liquid fatty phase is an organic phase that is liquid at ambient temperature (20°C) and at atmospheric pressure (760 mmHg), non-aqueous and water-immiscible.

The liquid fatty phase may contain a non-volatile oil chosen from polar oils and non-polar oils, and mixtures thereof.

15           A composition of the invention may comprise from 1.0% to 20.0% by weight, from 2.0% to 12.0% by weight and preferentially from 2.0% to 8.0% by weight of non-volatile oil, relative to the total weight of the composition.

A composition according to the invention generally comprises less than 5.0% by weight, preferably less than 2.0% by weight of volatile oil(s), relative to the total weight of  
20 the composition.

In one particularly preferred embodiment of the invention, the composition is free of volatile oils.

The term “volatile oil” is intended to mean an oil that can evaporate on contact with the skin in less than one hour, at ambient temperature (20°C) and atmospheric pressure  
25 (760 mmHg). More specifically, a volatile oil has an evaporation rate ranging from 0.01 to 200 mg/cm<sup>2</sup>/min.

#### **e) Colorant**

A composition according to the invention, and in particular those intended for  
30 makeup, generally comprises at least one colorant such as pulverulent colorants, liposoluble dyes or water-soluble dyes.

The pulverulent colorants can be chosen from pigments and pearlescent agents.

The pigments may be white or coloured, mineral and/or organic, and coated or uncoated. Mention may be made, among inorganic pigments, of titanium dioxide, optionally surface treated, zirconium, zinc or cerium oxides, and also iron or chromium oxides, manganese violet, ultramarine blue, chromium hydrate and ferric blue. Among the organic pigments that may be mentioned are carbon black, pigments of D & C type and lakes based on cochineal carmine or on barium, strontium, calcium or aluminium.

The pearlescent agents may be chosen from white pearlescent pigments such as mica coated with titanium or with bismuth oxychloride, coloured pearlescent pigments such as titanium mica with iron oxides, titanium mica especially with ferric blue or chromium oxide, titanium mica with an organic pigment of the abovementioned type, and also pearlescent pigments based on bismuth oxychloride.

The liposoluble dyes are, for example, Sudan Red, D&C Red 17, D&C Green 6,  $\beta$ -carotene, soybean oil, Sudan Brown, D&C Yellow 11, D&C Violet 2, D&C Orange 5, quinoline yellow and annatto.

Preferably, the composition according to the invention comprises a pulverulent colorant, preferably of pigment type, for example metal oxides.

Preferably, said colorant is present in the composition in a content ranging from 2.0% to 25.0% by weight, preferably from 3.0% to 20.0% by weight, more particularly from 4.0% to 15.0% by weight, relative to the total weight of the composition.

#### **f) Cosmetic active agents**

As cosmetic active agents that may be used in the compositions according to the invention, mention may be made in particular of antioxidants, preservatives, fragrances, neutralizers, cosmetic active agents, for instance emollients, vitamins and screening agents, in particular sunscreens, and mixtures thereof.

These additives may be present in the composition in a content ranging from 0.01% to 15.0% of the total weight of the composition.

Of course, those skilled in the art will take care to choose the optional additional additives and/or their amounts in such a way that the advantageous properties of the composition according to the invention are not, or are not substantially, detrimentally affected by the envisaged addition.

## **PHYSICAL CHARACTERISTICS**

### **(a) Solids content**

The composition according to the invention advantageously has a solids content at least equal to 42.0% by weight, and preferentially at least 44.0% by weight, relative to the total weight of the composition, or even from 45.0% to 60.0% by weight, relative to the total weight of the composition.

For the purposes of the present invention, the "*solids content*" denotes the content of non-volatile matter.

The amount of solids content (abbreviated as SC) of a composition according to the invention is measured using a Halogen Moisture Analyzer HR 73 commercial halogen desiccator from Mettler Toledo. The measurement is performed on the basis of the weight loss of a sample dried by halogen heating, and thus represents the percentage of residual matter once the water and the volatile matter have evaporated off.

This technique is fully described in the machine documentation supplied by Mettler Toledo.

The measuring protocol is as follows:

Approximately 2 g of the composition, referred to hereinbelow as the sample, are spread out on a metal crucible, which is placed in the halogen desiccator mentioned above. The sample is then subjected to a temperature of 105°C until a constant weight is obtained. The wet weight of the sample, corresponding to its initial weight, and the dry weight of the sample, corresponding to its weight after halogen heating, are measured using a precision balance.

The experimental error associated with the measurement is of the order of plus or minus 2%.

The solids content is calculated in the following manner:

[Math 1]

$$\text{Solids content (expressed as weight percentage)} = 100 \times \frac{\text{Dry weight}}{\text{Wet weight}}$$

### **b) Viscosity**

A composition according to the invention is advantageously creamy at an ambient temperature of 20°C.

It is characterized by a viscosity of less than 60 Pa.s, or even preferably less than 45 Pa.s, measured at an ambient temperature of 20°C using an RM100® Rheomat.

Preferably, the viscosity of the compositions according to the invention ranges from 2.0 to 60.0 Pa.s, or even preferably from 2.5 to 45.0 Pa.s, measured at the ambient  
5 temperature of 20°C using an RM100® Rheomat.

Such a viscosity is particularly advantageous since it is the most suitable for the device for applying mascara and since it enables easy use for the consumer for a charging result.

The composition may be produced via the known processes generally used in  
10 the cosmetics field.

The composition used according to the invention may be a makeup composition, a makeup base, in particular for keratin fibers, or base coat, a composition to be applied onto makeup, also known as topcoat, or else a composition for treating keratin fibers.

More especially, the composition according to the invention is a mascara.

Such compositions are especially prepared according to the general knowledge  
15 of those skilled in the art.

The expressions "*between... and...*" and "*ranging from... to...*" should be understood as being inclusive of the limits, unless otherwise specified.

In the description and the examples, the percentages are percentages by weight, unless otherwise indicated. The percentages are thus given by weight relative to the total  
20 weight of the composition. The ingredients are mixed in the order and under conditions that are readily determined by those skilled in the art.

The invention will now be described by means of examples which are present purely for illustrative purposes and should not be interpreted as examples that limit the  
25 invention.

### **Example**

A composition of mascara type, in accordance with the invention (Composition 1) and a composition not in accordance with the invention (Composition 2) were prepared  
30 as described below.

#### *Preparation of phase A*

The starting materials were carefully weighed out beforehand using a balance (precision = 0.01 g). The ingredients of phase A were melted in a jacketed heating pan in which circulates an oil of which the temperature is controlled by means of a thermostatic oil bath. The setpoint temperature was fixed at 90°C. After total melting, the pigment was  
5 introduced with stirring using a Rayneri blender. Stirring was maintained until a homogeneous preparation was obtained.

*Preparation of phase B*

The water was preheated in an electric kettle to 95°C. The preservatives and the inorganic base were introduced into the water in a beaker at a temperature of 80 °C with  
10 stirring using a Rayneri blender.

*Emulsification of phases A and B*

Phase B was poured into phase A with stirring for 5 minutes at 90°C using a Rayneri blender. Phase A + B was then cooled to ambient temperature with stirring.

Table 1 below describes their respective compositions in detail.

15 The mascara thus obtained was transferred into a closed container to prevent it from drying out on contact with air. After 24 hours, the macroscopic homogeneity of the sample and the state of dispersion of the fatty substances and of the pigment were evaluated under an optical microscope and the viscosity was measured

[Table 1]

|   | INCI name                                                                    | Commercial reference                        | Composition 1 <u>according to the invention</u> | Composition 2 <u>outside the invention</u> |
|---|------------------------------------------------------------------------------|---------------------------------------------|-------------------------------------------------|--------------------------------------------|
| A | CETEARYL ALCOHOL (C <sub>16</sub> -C <sub>18</sub> ) ( <i>compound (4)</i> ) | Lanette O OR/MB from BASF                   | 4.00                                            | 4.00                                       |
|   | TRIBEHENIN ( <i>compound (1)</i> )                                           | Synchrowax HRC-PA-(MH) from Croda           | 15.00                                           | 21.00                                      |
|   | COPOLYMER OF ETHYLENE DIAMINE AND OF DILINOLEIC ACID ( <i>compound (5)</i> ) | Oleocraft LP-10-PA-(MV) from Croda          | 6.00                                            | -                                          |
|   | STEARIC ACID ( <i>compound (2)</i> )                                         | Stearic acid 1850 from Southern Acids       | 6.00                                            | 6.00                                       |
|   | IRON OXIDES                                                                  | Sunpuro black iron oxide C33-7001 from Sun  | 8.00                                            | 8.00                                       |
|   | POLYVINYL PYRROLIDONE                                                        | Polyvinyl pyrrolidone K 30 Powder from BASF | 2.00                                            | 2.00                                       |
| B | PHENOXYETHANOL                                                               | Protectol PE CO from BASF                   | 0.60                                            | 0.60                                       |
|   | CHLORPHENESIN                                                                | Cosvat L from Kraeber                       | 0.30                                            | 0.30                                       |
|   | CAPRYLY GLYCOL                                                               | 199602 Hydrolite CG from Symrise            | 0.80                                            | 0.80                                       |
|   | SODIUM HYDROXIDE ( <i>compound (3)</i> )                                     | 50% caustic soda from Dow Chemicals         | 1.27                                            | 1.27                                       |
|   | WATER ( <i>compound (6)</i> )                                                |                                             | qs                                              | qs                                         |
|   |                                                                              | Viscosity at 24 H (in Pa.s)                 | 42.5                                            | 100                                        |

The stability of the compositions was examined after a residence time of two months at 45°C. The texture of the sample that had spent time at 45°C was then compared with respect to that of the sample that remained at ambient temperature.

5 A stable composition is a composition which retains its texture, and its homogeneity and the application of which remains pleasant. Conversely, a composition is described as unstable if its texture has become much thicker, if phase separation appears or if the composition is no longer pleasant on application.

Composition 1 has the performance levels suitable for use for the purposes of caring for and/or making up the eyelashes.

10 The texture of composition 1 is pleasant on application. It has a long playtime. Thus, when it is applied to eyelashes, the separation of the eyelashes is preserved even after a large number of brush strokes.

On the other hand, composition 2 outside the invention does not prove to be satisfactory in terms of stability. Its texture is in particular too rigid and it cannot therefore  
15 be used for makeup.

**CLAIMS**

1. A composition, preferably a cosmetic composition, for caring for and/or making up keratin fibers, in particular the eyelashes and/or the eyebrows, comprising:

(1) at least one ester of a polyol and of fatty acid(s), said fatty acid(s) having a number of carbon atoms greater than or equal to 20,

(2) at least one fatty acid having from 14 carbon atoms to less than 20 carbon atoms,

(3) at least one inorganic base, capable of at least partially neutralizing said fatty acid

(2), in particular chosen from alkali metal hydroxides,

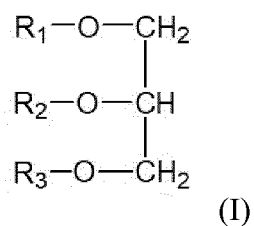
(4) at least one fatty alcohol preferably chosen from C<sub>14</sub>-C<sub>30</sub> fatty alcohols, better still chosen from the linear and saturated C<sub>14</sub>-C<sub>24</sub>, even better still C<sub>14</sub>-C<sub>20</sub>, fatty alcohols,

(5) at least one non-silicone polymeric gelling agent comprising hydrogen bonds, and

(6) water.

2. The composition as claimed in the preceding claim, containing less than 5% by weight, and preferably less than 3% by weight of waxes, relative to the total weight of said composition.

3. The composition as claimed in either one of the preceding claims, wherein the ester(s) of a polyol and of fatty acid(s) (1) is (are) chosen from the esters of glycerol et of fatty acid(s) of formula (I) below:



wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> can represent, independently of one another, a hydrogen atom H or a saturated or unsaturated, linear or branched acyl radical having a number of carbon atoms greater than or equal to 20, at least one of R<sub>1</sub>, R<sub>2</sub> and/or R<sub>3</sub> representing a saturated or unsaturated, linear or branched acyl radical having a number of carbon atoms greater than or equal to 20.

4. The composition as claimed in the preceding claim, wherein the radicals  $R_1$ ,  $R_2$  and  $R_3$  are acyl radicals having a number of carbon atoms ranging from 20 to 30, preferably from 20 to 24, such as arachidyl or behenyl, better still behenyl.

5. The composition as claimed in any one of the preceding claims, wherein the ester(s) of a polyol and of fatty acid(s) (1) is (are) chosen from a triester of glycerol and of fatty acid(s) and a mixture of mono-, di- and triesters of glycerol and of fatty acids, preferably chosen from the triester of glycerol and of behenic acid and a mixture of mono-, di- and triesters of glycerol and of behenic acid, better still is tribehenin.

6. The composition as claimed in any one of the preceding claims, comprising at least 5.0% by weight, preferably at least 6.0% by weight, notably at least 7.0% by weight, in particular from 6.0% to 35.0% by weight, preferably from 7.0% to 30.0%, or even from 8.0% to 28.0% by total weight of ester(s) of a polyol and of fatty acid(s) (1), relative to the total weight of said composition.

7. The composition as claimed in any one of the preceding claims, wherein the fatty acid(s) (2) is (are) chosen from linear fatty acids, saturated fatty acids and mixtures thereof, and preferably from linear and saturated fatty acids.

8. The composition as claimed in any one of the preceding claims, wherein the fatty acid(s) (2) is (are) chosen from stearic acid and palmitic acid and mixtures thereof, and preferably comprises at least stearic acid.

9. The composition as claimed in any one of the preceding claims, comprising at least 3.0% by weight, in particular from 3.5% to 20.0% by weight, preferably from 4.0% to 20.0% by weight, better still from 4.5% to 15.0% by weight, even better still from 5.0% to 15.0% by total weight of fatty acid (2), in particular of stearic acid, relative to the total weight of said composition.

10. The composition as claimed in any one of the preceding claims, wherein the inorganic base (3) is chosen from sodium hydroxide and/or potassium hydroxide, and preferably is at least sodium hydroxide.

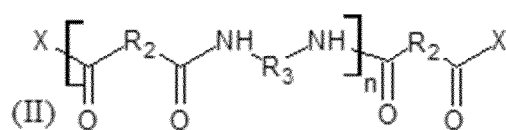
11. The composition as claimed in any one of the preceding claims, comprising at least 0.1% by weight, better still at least 0.15% by weight of inorganic base(s) (3), in particular from 0.2% to 3.0% by weight, preferably from 0.3% to 2.0% by total weight of inorganic base(s) (3), in particular of sodium hydroxide, relative to the total weight of the composition.

12. The composition as claimed in any one of the preceding claims, comprising at least one fatty alcohol (4) chosen from (C<sub>16</sub>) cetyl alcohol, (C<sub>18</sub>) stearyl alcohol and mixtures thereof, and is preferably a mixture of cetyl alcohol and stearyl alcohol.

13. The composition as claimed in any one of the preceding claims, comprising at least from 1.0% to 20.0% by weight, preferably from 2.0% to 15.0% by weight, and even more preferentially from 3.0% to 10.0% by weight of fatty alcohol(s) (4), relative to the total weight of the composition.

14. The composition as claimed in any one of the preceding claims, wherein the non-silicone polymeric gelling agent(s) comprising hydrogen bonds (5) is (are) chosen from polyamides.

15. The composition as claimed in any one of the preceding claims, wherein the non-silicone polymeric gelling agent(s) comprising hydrogen bonds (5) is a hydrocarbon-based polyamide with an ester end group of formula (II):



wherein X represents a group -N(R<sub>1</sub>)<sub>2</sub> or a group -OR<sub>1</sub> wherein each R<sub>1</sub> is a linear or branched C<sub>8</sub> to C<sub>22</sub>, preferably C<sub>16</sub> to C<sub>22</sub>, alkyl radical which may be identical to or different than one another, R<sub>2</sub> is a C<sub>28</sub>-C<sub>42</sub> diacid dimer residue, and R<sub>3</sub> is an ethylenediamine radical with n ranging from 2 to 5.

16. The composition as claimed in any one of the preceding claims, wherein the non-silicone polymeric gelling agent(s) comprising hydrogen bonds (5) is an ethylenediamine/stearyl dimer dilinoleate copolymer, having the INCI name ethylenediamine/stearyl dimer dilinoleate copolymer.

17. The composition as claimed in any one of the preceding claims, comprising at least 2.0% by weight, preferably from 3.0% to 20.0% by weight, better still from 4.0% to 15.0% by weight, or even from 5.0% to 15.0% by total weight of non-silicone polymeric gelling agent(s) comprising hydrogen bonds (5), in particular of ethylenediamine/stearyl dimer dilinoleate copolymer, having the INCI name ethylenediamine/stearyl dimer dilinoleate copolymer, relative to the total weight of the composition.

18. The composition as claimed in any one of the preceding claims, the solids content of which is at least 42.0% by weight, preferably at least 44.0% by weight, or even from 45.0% to 60.0% by weight, relative to the total weight of said composition.

19. The composition as claimed in any one of the preceding claims, comprising at least 30% by weight, better still at least 40% by weight, or even a content of from 50% to 60% by weight of water (6), relative to the total weight of said composition.

20. The composition as claimed in any one of the preceding claims, comprising less than 5.0% by weight, preferably less than 2.0% by weight of volatile oil(s), relative to the total weight of said composition, even better still the composition is free of volatile oils.

21. The composition as claimed in any one of the preceding claims, comprising less than 5.0% by weight, preferably less than 2.0% by weight of non-ionic surfactants with an HLB, measured at 25°C, of greater than or equal to 7, relative to the total weight of said composition, even better still the composition is free of non-ionic surfactants with an HLB, measured at 25°C, of greater than or equal to 7.

22. The composition as claimed in any one of the preceding claims, comprising at least one (poly)vinylpyrrolidone hydrophilic polymer.

23. The composition as claimed in any one of the preceding claims, comprising at least one pulverulent colorant, preferably of pigment type, for example metal oxides.

24. The composition as claimed in any one of the preceding claims, further comprising from 2.0% to 25.0% by weight, preferably from 3.0% to 20.0% by weight, more particularly from 4.0% to 15.0% by total weight of colorant, relative to the total weight of said composition.

- 5 25. A process, in particular cosmetic process, for caring for and/or making up keratin materials, in particular the eyelashes and/or the eyebrows, comprising at least one step consisting in applying, to said keratin materials, in particular the eyelashes and/or eyebrows, a composition as claimed in any one of claims 1 to 24.

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>A. CLASSIFICATION OF SUBJECT MATTER</b><br>INV. A61Q1/10      A61K8/37      A61K8/36      A61K8/34      A61K8/88<br>ADD.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                             |                                                                                                                               |
| According to International Patent Classification (IPC) or to both national classification and IPC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                             |                                                                                                                               |
| <b>B. FIELDS SEARCHED</b><br>Minimum documentation searched (classification system followed by classification symbols)<br>A61Q A61K                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                             |                                                                                                                               |
| 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)<br>EPO-Internal, WPI Data, CHEM ABS Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                             |                                                                                                                               |
| <b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                             |                                                                                                                               |
| Category*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Citation of document, with indication, where appropriate, of the relevant passages                                                                                                          | Relevant to claim No.                                                                                                         |
| X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | DATABASE GNPD [Online]<br>MINTEL;<br>9 June 2011 (2011-06-09),<br>anonymous: "Volume Mascara",<br>XP055603576,<br>retrieved from www.gnpd.com<br>Database accession no. 1557501             | 1-13,<br>17-25                                                                                                                |
| Y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | abstract<br>-----                                                                                                                                                                           | 14-16                                                                                                                         |
| X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | DATABASE GNPD [Online]<br>MINTEL;<br>15 February 2018 (2018-02-15),<br>anonymous: "2 in 1 Volume Mascara",<br>XP055603560,<br>retrieved from www.gnpd.com<br>Database accession no. 5452119 | 1-13,<br>17-25                                                                                                                |
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| <div style="display: flex; justify-content: space-between;"> <span><input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.</span> <span><input checked="" type="checkbox"/> See patent family annex.</span> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                             |                                                                                                                               |
| <div style="display: flex;"> <div style="flex: 1;"> <p>* Special categories of cited documents :</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="flex: 1;"> <p>"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</p> <p>"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</p> <p>"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</p> <p>"&amp;" document member of the same patent family</p> </div> </div> |                                                                                                                                                                                             |                                                                                                                               |
| Date of the actual completion of the international search<br><br><div style="text-align: center; font-size: 1.2em;">16 March 2020</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                             | Date of mailing of the international search report<br><br><div style="text-align: center; font-size: 1.2em;">25/03/2020</div> |
| Name and mailing address of the ISA/<br>European Patent Office, P.B. 5818 Patentlaan 2<br>NL - 2280 HV Rijswijk<br>Tel. (+31-70) 340-2040,<br>Fax: (+31-70) 340-3016                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                             | Authorized officer<br><br><div style="text-align: center; font-size: 1.2em;">Verrucci, Marinella</div>                        |

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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| X         | WO 2017/103102 A1 (OREAL [FR])<br>22 June 2017 (2017-06-22)<br>page 1, line 30 - page 2, line 3<br>claim 9<br>example 1<br>page 23, line 11 - line 17<br>-----                                       | 1-25                  |
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Information on patent family members

International application No

PCT/EP2019/086827

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