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(54) Title: CONDITIONING COSMETIC COMPOSITION COMPRISING A NON-IONIC SURFACTANT, A POLYSACCHARIDE, A CATIONIC POLYMER AND A LIQUID FATTY SUBSTANCE

(57) Abstract: Conditioning cosmetic composition comprising a non-ionic surfactant, a polysaccharide, a cationic polymer and a liquid fatty substance A subject of the invention is a cosmetic composition comprising: a) one or more non-ionic surfactants, b) one or more polysaccharides representing from 2% to 20% by weight, relative to the total weight of the composition, c) one or more cationic polymers comprising one or more units derived from one or more acrylic acid-or methacrylic acid-based monomers, d) one or more fatty substances that are liquid at ambient temperature and at ambient pressure, and e) water. A subject of the invention is also a process for the cosmetic treatment of keratin materials, in particular keratin fibres, comprising a step of applying this composition to said keratin materials. Finally, a subject of the invention is the use of the composition for the cosmetic treatment of keratin materials, in particular keratin fibres, in particular the hair, and preferably for conditioning said materials.



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Conditioning cosmetic composition comprising a non-ionic surfactant, a polysaccharide, a cationic polymer and a liquid fatty substance

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A subject of the invention is a cosmetic composition comprising at least one non-ionic surfactant, at least one polysaccharide, at least one particular cationic polymer, at least one liquid fatty substance and water.

10 A subject of the invention is also a process for the cosmetic treatment of keratin materials, in particular keratin fibres, comprising a step of applying this composition to said keratin materials.

Finally, a subject of the invention is the use of the composition for the cosmetic treatment of keratin materials, in particular keratin fibres, in particular the hair, and preferably for conditioning said fibres.

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

20 Accordingly, to remedy these drawbacks, it is now common to use cosmetic treatment compositions that contain cosmetic agents, known as conditioning agents, intended mainly to repair or to limit the harmful or undesirable effects brought about by the various treatments or attacks to which hair fibres are more or less repeatedly subjected. These conditioning agents may of course also improve the cosmetic behaviour of natural hair, in particular giving it sheen, softness, suppleness, lightness,
25 a natural feel and also disentangling properties.

Hair conditioning compositions containing an aqueous phase and a fatty phase gelled by means of mineral thickeners have been described, for example, in application FR 3 022 781.

30 However, the mineral thickening agents used to stabilize the mixture of the two types of phases have the drawback of exuding over time, in particular at high storage temperatures. Thus, phase coalescence phenomena can occur, leading to phase separation of the mixture and/or a drop in the viscosity of the composition over time.

Consequently, there is a need to improve the stability of such compositions.

However, these compositions must also retain good working properties and good conditioning performance levels. In particular regarding the working properties, it must advantageously be possible for the composition to be easily applied to the keratin fibres and to be rapidly rinsed off, where appropriate. Regarding the
5 performance properties, the composition must advantageously confer, on the keratin fibres, good cosmetic properties, in particular sheen, softness, suppleness and lightness properties and a natural feel, and good disentangling properties, without however making the keratin fibres greasy or making them lank.

Thus, there is a need to prepare cosmetic treatment compositions, in particular
10 conditioning compositions, which have good stability over time (several months), in particular at high storage temperatures (for example 45°C) while at the same time retaining good working and performance properties.

It has now been discovered, surprisingly, that a cosmetic composition comprising a non-ionic surfactant, a polysaccharide, a particular cationic polymer, a
15 liquid fatty substance and water makes it possible to achieve the objectives set out above.

A subject of the present invention is thus a cosmetic composition comprising:
a) one or more non-ionic surfactants,
b) one or more polysaccharides representing from 2% to 20% by weight,
20 relative to the total weight of the composition,
c) one or more cationic polymers comprising one or more units derived from one or more acrylic acid- or methacrylic acid-based monomers,
d) one or more liquid fatty substances, and
e) water.

25 The composition according to the invention makes it possible to efficiently condition the keratin fibres and has the advantage of being able to be applied easily and also of being rapidly rinsed off.

In other words, the composition according to the invention has improved working qualities and good conditioning performance levels, in particular in terms of
30 sheen, softness, suppleness, lightness, natural feel and also disentangling properties.

Moreover, the composition according to the invention is stable with respect to storage over time, both at ambient temperature (25°C) and at higher temperatures such as at 45°C and even more, such as at 60°C.

For the purposes of the present invention, the term "stable with respect to storage over time" is intended to mean that the following physical characteristics of the composition vary little, or even not at all, over time, in particular after 2 months: appearance, pH, rheology (viscosity, consistency).

5 In particular, the composition does not give rise to any phase-separation or exudation phenomena over time, and at the intended storage temperature.

A subject of the invention is also a process for the cosmetic treatment of keratin materials, in particular keratin fibres, comprising a step of applying the composition according to the invention to said keratin materials.

10 Finally, a subject of the invention is the use of the composition according to the invention for the cosmetic treatment of keratin materials, in particular keratin fibres, in particular the hair, and preferably for conditioning keratin fibres, in particular the hair.

Other subjects, characteristics, aspects and advantages of the invention will
15 emerge even more clearly on reading the description and the examples that follow.

In the text hereinbelow, and unless otherwise indicated, the limits of a range of values are included within that range, especially in the expressions "between" and "ranging from ... to ...".

Moreover, the expressions "at least one" and "at least" used in the present
20 description are equivalent to the expressions "one or more" and "greater than or equal to", respectively.

According to the present application, the term "keratin materials" mainly denotes keratin fibres and the skin.

According to the present application, the term "keratin fibres" mainly denotes
25 human keratin fibres and in particular the hair.

The composition according to the invention comprises one or more non-ionic surfactants.

The non-ionic surfactant(s) present in the composition according to the invention are described, for example, in the "Handbook of Surfactants" by M.R. Porter,
30 published by Blackie & Son (Glasgow and London), 1991, pages 116-178.

Examples of non-ionic surfactants that may be mentioned include the following non-ionic surfactants:

- oxyalkylenated (C₈-C₂₄)alkylphenols;

- saturated or unsaturated, linear or branched, oxyalkylenated or glycerolated C₈ to C₄₀ alcohols, which are preferably oxyalkylenated, preferably comprising one or two fatty chains;
- saturated or unsaturated, linear or branched, oxyalkylenated C₈ to C₃₀ fatty acid amides;
- esters of saturated or unsaturated, linear or branched, C₈ to C₃₀ acids and of polyethylene glycols;
- preferably oxyethylenated esters of saturated or unsaturated, linear or branched, C₈ to C₃₀ acids and of sorbitol;
- esters of fatty acids and of sucrose;
- (C₈-C₃₀)alkyl(poly)glucosides, (C₈-C₃₀)alkenyl(poly)glucosides, which are optionally oxyalkylenated (0 to 10 oxyalkylene units) and comprise from 1 to 15 glucose units, (C₈-C₃₀)alkyl(poly)glucoside esters;
- saturated or unsaturated oxyethylenated plant oils;
- condensates of ethylene oxide and/or of propylene oxide;
- N-(C₈-C₃₀)alkylglucamine and N-(C₈-C₃₀)acylmethylglucamine derivatives;
- aldobionamides;
- amine oxides;
- oxyethylenated and/or oxypropylenated silicones;
- and mixtures thereof.

The oxyalkylene units are more particularly oxyethylene or oxypropylene units, or a combination thereof, preferably oxyethylene units.

- The number of moles of ethylene oxide and/or of propylene oxide preferably ranges from 1 to 250, more particularly from 2 to 100 and better still from 2 to 50; the number of moles of glycerol ranges in particular from 1 to 50 and better still from 1 to 10.

Advantageously, the non-ionic surfactant(s) according to the invention do not comprise any oxypropylene units.

- By way of example of glycerolated non-ionic surfactants, use is preferably made of monoglycerolated or polyglycerolated C₈ to C₄₀ alcohols comprising from 1 to 50 mol of glycerol, preferably from 1 to 10 mol of glycerol.

Mention may be made, as examples of compounds of this type, of lauryl alcohol containing 4 mol of glycerol (INCI name: Polyglyceryl-4 Lauryl Ether), lauryl alcohol containing 1.5 mol of glycerol, oleyl alcohol containing 4 mol of glycerol

(INCI name: Polyglyceryl-4 Oleyl Ether), oleyl alcohol containing 2 mol of glycerol (INCI name: Polyglyceryl-2 Oleyl Ether), cetearyl alcohol containing 2 mol of glycerol, cetearyl alcohol containing 6 mol of glycerol, oleocetyl alcohol containing 6 mol of glycerol and octadecanol containing 6 mol of glycerol.

5 Among the glycerolated alcohols, it is more particularly preferred to use the C₈ to C₁₀ alcohol containing 1 mol of glycerol, the C₁₀ to C₁₂ alcohol containing 1 mol of glycerol and the C₁₂ alcohol containing 1.5 mol of glycerol.

The non-ionic surfactant(s) used in the composition according to the invention are preferentially chosen from:

10 - saturated or unsaturated, linear or branched oxyethylenated C₈ to C₄₀, in particular C₁₀-C₃₂, or even C₁₂-C₂₈, alcohols comprising from 1 to 100 mol of ethylene oxide, preferably from 2 to 50, more particularly from 2 to 40 mol of ethylene oxide; they preferably comprise one or two C₈ to C₄₀, in particular C₁₀-C₃₂, or even C₁₂-C₂₈, fatty chains; they preferentially comprise only one C₈ to C₄₀, in particular C₁₀-C₃₂, or
15 even C₁₂-C₂₈ fatty chain;

- saturated or unsaturated oxyethylenated plant oils comprising from 1 to 100 and preferably from 2 to 50 mol of ethylene oxide;

- (C₈-C₃₀)alkyl(poly)glucosides, which are optionally oxyalkylenated, preferably with 0 to 10 mol of ethylene oxide and comprise 1 to 15 glucose units;

20 - monoglycerolated or polyglycerolated C₈ to C₄₀, in particular C₁₀-C₃₂, or even C₁₂-C₂₈, alcohols comprising from 1 to 50 mol of glycerol, preferably from 1 to 10 mol of glycerol;

- saturated or unsaturated, linear or branched, oxyalkylenated C₈ to C₃₀ fatty acid amides;

25 - esters of saturated or unsaturated, linear or branched, C₈ to C₃₀ acids and of polyethylene glycols;

- preferably oxyethylenated esters of saturated or unsaturated, linear or branched, C₈ to C₃₀ acids and of sorbitol;

- and mixtures thereof.

30 More preferentially, the non-ionic surfactant(s) used in the composition according to the invention are chosen from:

- saturated or unsaturated, linear or branched, oxyethylenated or glycerolated, preferably oxyethylenated, C₈ to C₄₀, preferably C₁₀-C₃₂, more preferentially C₁₂-C₂₈, alcohols,

- (C₈-C₃₀)alkyl(poly)glucosides, which are optionally oxyalkylenated and which comprise from 1 to 15 glucose units;

- and a mixture thereof.

Even more preferentially, the non-ionic surfactants are chosen from saturated or unsaturated, linear or branched, oxyethylenated C₈ à C₄₀ alcohols comprising from 1 to 100 mol of ethylene oxide, preferably from 2 to 50, more particularly from 2 to 40 mol and preferably comprising at least one C₈-C₂₀, in particular C₁₀-C₃₂, or even C₁₂-C₂₈, alkyl chain, in particular the compound steareth-20, and (C₈-C₃₀)alkyl(poly)glucosides, which are optionally oxyalkylenated and which comprise from 1 to 15 glucose units, such as the compound with the INCI name Cetearyl glucoside, and a mixture thereof.

Preferably, the non-ionic surfactant(s) represent from 0.01% to 20% by weight, preferably from 0.1% to 10% by weight, and more preferentially from 0.3% to 5% by weight relative to the total weight of the composition.

As indicated previously, the composition according to the invention comprises one or more polysaccharides.

For the purposes of the present invention, the term "polysaccharides" is intended to mean a polymer constituted of sugar units.

For the purposes of the present invention, the term "sugar unit" is intended to mean an oxygen-bearing hydrocarbon-based compound containing several alcohol functions, with or without aldehyde or ketone functions, and which comprises at least 4 carbon atoms.

The sugar units may be optionally modified by substitution, and/or by oxidation and/or by dehydration.

The sugar units that may be included in the composition of the polysaccharides of the invention are preferably derived from the following sugars: glucose, galactose, arabinose, rhamnose, mannose, xylose, fucose, anhydrogalactose, galacturonic acid, glucuronic acid, mannuronic acid, galactose sulfate, anhydrogalactose sulfate and fructose.

Mention may in particular be made, by way of polysaccharides, of native gums such as:

a) tree or shrub exudates, including:

- gum arabic (branched polymer of galactose, arabinose, rhamnose and glucuronic acid);

- ghatti gum (polymer derived from arabinose, galactose, mannose, xylose and glucuronic acid);
- karaya gum (polymer derived from galacturonic acid, galactose, rhamnose and glucuronic acid);
- 5 - gum tragacanth (polymer of galacturonic acid, galactose, fucose, xylose and arabinose);
- b) gums resulting from algae, including:
 - agar (polymer derived from galactose and anhydrogalactose);
 - alginates (polymers of mannuronic acid and of glucuronic acid);
 - 10 - carrageenans and furcellerans (polymers of galactose sulfate and of anhydrogalactose sulfate);
 - c) gums resulting from seeds or tubers, including:
 - guar gum (polymer of mannose and galactose);
 - locust bean gum (polymer of mannose and galactose);
 - 15 - fenugreek gum (polymer of mannose and galactose);
 - tamarind gum (polymer of galactose, xylose and glucose);
 - konjac gum (polymer of glucose and mannose);
 - d) microbial gums, including:
 - xanthan gum (polymer of glucose, mannose acetate, mannose/pyruvic acid
 - 20 and glucuronic acid);
 - gellan gum (polymer of partially acylated glucose, rhamnose and glucuronic acid);
 - scleroglucan gum (glucose polymer);
 - e) polymers extracted from plants, including:
 - 25 - celluloses (glucose polymers);
 - starches (glucose polymers) and
 - inulin.

The polysaccharide(s) of the composition according to the invention can also be chosen from mixtures of the polysaccharides above.

30 These polymers can be physically or chemically modified. As physical treatment, mention may in particular be made of a heat treatment.

Chemical treatments that may be mentioned include esterification, etherification, amidation and oxidation reactions. These treatments make it possible to produce polymers that may especially be non-ionic, anionic or amphoteric.

Preferably, these chemical or physical treatments are applied to guar gums, locust bean gums, starches and celluloses.

The non-ionic guar gums that may be used according to the invention may be modified with C₁-C₆ (poly)hydroxyalkyl groups.

5 Among the C₁-C₆ (poly)hydroxyalkyl groups, mention may be made, by way of example, of hydroxymethyl, hydroxyethyl, hydroxypropyl and hydroxybutyl groups.

10 These guar gums are well known from the prior art and may be prepared, for example, by reacting corresponding alkene oxides, for instance propylene oxides, with the guar gum so as to obtain a guar gum modified with hydroxypropyl groups.

The degree of hydroxyalkylation preferably varies from 0.4 to 1.2 and corresponds to the number of alkylene oxide molecules consumed by the number of free hydroxyl functions present on the guar gum.

15 Such non-ionic guar gums optionally modified with hydroxyalkyl groups are sold, for example, under the trade names Jaguar HP8, Jaguar HP60 and Jaguar HP120 by the company Rhodia Chimie.

20 The botanical origin of the starches that may be used in the present invention may be cereals or tubers. Thus, the starches are chosen, for example, from corn starch, rice starch, cassava starch, barley starch, potato starch, wheat starch, sorghum starch and pea starch.

25 Distarch phosphates or compounds rich in distarch phosphate will preferentially be used, for instance the product sold under the references Prejel VA-70-T AGGL (gelatinized hydroxypropyl cassava distarch phosphate), Prejel TK1 (gelatinized cassava distarch phosphate) or Prejel 200 (gelatinized acetyl cassava distarch phosphate) by the company Avebe, or Structure Zea from National Starch (gelatinized corn distarch phosphate).

30 According to the invention, amphoteric starches may also be used, these amphoteric starches comprising one or more anionic groups and one or more cationic groups. The anionic and cationic groups may be bonded to the same reactive site of the starch molecule or to different reactive sites; they are preferably bonded to the same reactive site. The anionic groups may be of carboxylic, phosphate or sulfate type, preferably carboxylic. The cationic groups may be of primary, secondary, tertiary or quaternary amine type.

The starches may be derived from any plant source of starch, in particular such as corn, potato, oat, rice, tapioca, sorghum, barley or wheat. It is also possible to use the hydrolysates of the starches mentioned above. The starch is preferably derived from potato.

5 The polysaccharides that can be used according to the invention may be cellulose-based polymers.

 According to the invention, the term "cellulose-based polymer" is intended to mean any polysaccharide compound having in its structure sequences of glucose residues linked together via β -1,4 bonds; in addition to the unsubstituted celluloses, the
10 cellulose derivatives may be anionic, cationic, amphoteric or non-ionic.

 Thus, the cellulose polymers that may be used according to the invention may be chosen from unsubstituted celluloses, including those in a microcrystalline form, and cellulose ethers.

 Among these cellulose-based polymers, cellulose ethers, cellulose esters and
15 cellulose ester ethers are distinguished.

 Among the cellulose esters are mineral esters of cellulose (cellulose nitrates, sulfates, phosphates, etc.), organic cellulose esters (cellulose monoacetates, triacetates, amidopropionates, acetatebutyrates, acetatepropionates and acetatetrimellitates, etc.), and mixed organic/mineral esters of cellulose, such as cellulose acetatebutyrate
20 sulfates and cellulose acetatepropionate sulfates. Among the cellulose ester ethers, mention may be made of hydroxypropylmethylcellulose phthalates and ethylcellulose sulfates.

 Among the non-ionic cellulose ethers, mention may be made of (C₁-C₄)alkylcelluloses, such as methylcelluloses and ethylcelluloses (for example, Ethocel
25 Standard 100 Premium from Dow Chemical); (poly)hydroxy(C₁-C₄)alkylcelluloses, such as hydroxymethylcelluloses, hydroxyethylcelluloses (for example, Natrosol 250 HHR provided by Ashland) and hydroxypropylcelluloses (for example, Klucel EF from Aqualon); (poly)hydroxy(C₁-C₄)alkyl(C₁-C₄)alkylcellulose mixed celluloses, such as hydroxypropylmethylcelluloses (for example, Methocel E4M from Dow
30 Chemical), hydroxyethylmethylcelluloses, hydroxyethylethylcelluloses (for example, Bermocoll E 481 FQ from AkzoNobel) and hydroxybutylmethylcelluloses.

 Among the anionic cellulose ethers, mention may be made of (poly)carboxy(C₁-C₄)alkylcelluloses and salts thereof. By way of example, mention may be made of carboxymethylcelluloses, carboxymethylmethylcelluloses (for

example Blanose 7M from the company Aqualon) and carboxymethylhydroxyethylcelluloses, and the sodium salts thereof.

Among the cationic cellulose ethers, mention may be made of cationic cellulose derivatives such as cellulose copolymers or cellulose derivatives grafted with
5 a water-soluble quaternary ammonium monomer, and described in particular in patent US 4 131 576, such as (poly)hydroxy(C₁-C₄)alkyl celluloses, for instance hydroxymethyl-, hydroxyethyl- or hydroxypropylcelluloses grafted especially with a methacryloyl ethyltrimethylammonium, methacrylamidopropyltrimethylammonium or dimethyldiallylammonium salt. The commercial products corresponding to this
10 definition are more particularly the products sold under the names Celquat® L 200 and Celquat® H 100 by the company National Starch.

Particularly preferably, the polysaccharide(s) are chosen from:

- celluloses,
- starches, and
- 15 - mixtures of these compounds,

these polysaccharides optionally being modified by a heat treatment, an esterification reaction, an etherification reaction, an amidation reaction or an oxidation reaction.

Most particularly preferably, the polysaccharide(s) are chosen from a mixture
20 of one or more celluloses and of one or more starches, which may or may not be modified.

Even more preferentially, the polysaccharide(s) are chosen from a mixture of one or more cellulose ethers, which are preferably non-ionic, and of one or more distarch phosphates.

25 The polysaccharide(s) represent in total from 2% to 20% by weight, preferably from 2% to 15% by weight and more preferentially from 3% to 10% by weight, relative to the total weight of the composition according to the invention.

In a most particularly preferred embodiment of the invention, the composition comprises at least two distinct polysaccharides such as those mentioned above.

30 In particular in this preferred embodiment, the composition according to the invention comprises a mixture of cellulose(s) and of starch(es) such as those mentioned above, in particular a mixture of cellulose ether(s) and of distarch phosphate(s).

In the particular case of a mixture of cellulose(s) and starch(es), the weight ratio of the amount of starch to the amount of cellulose is preferably between 0.1 and 10, more preferentially between 0.5 and 5, and in particular between 1 and 2.5.

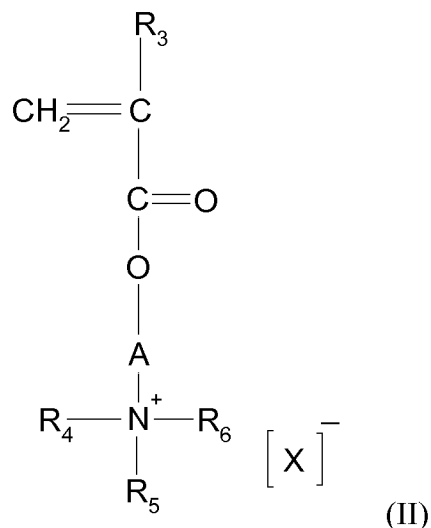
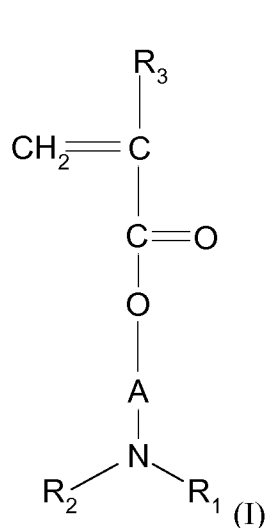
In one preferred embodiment of the invention, the weight ratio between the total amount of the polysaccharide(s) b) and the total amount of the non-ionic surfactant(s) a) is between 0.1 and 15, preferably between 0.5 and 10, and more preferentially between 1 and 5.

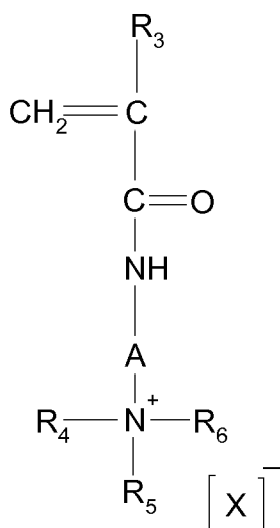
As previously described, the composition according to the invention comprises one or more cationic polymers comprising one or more units derived from one or more acrylic acid- or methacrylic acid-based monomers.

The term “unit derived from a monomer” is intended to mean the unit formed directly at the end of the monomer polymerization step.

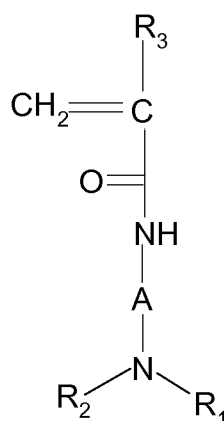
The term “acrylic acid- or methacrylic acid-based monomer” is of course intended to mean acrylic acid and methacrylic acid, but also in particular the esters or amides of acrylic acid or methacrylic acid.

In particular, the cationic polymer(s) that can be used according to the invention preferably comprise one or more units derived from one or more monomers chosen from those having the following structures:





(III)



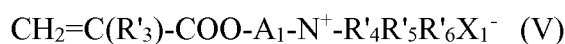
(IV)

in which:

- R_1 and R_2 , which may be identical or different, denote a hydrogen atom or a C_1 to C_6 alkyl group, preferably a C_1 to C_4 alkyl group,
- 5 - R_3 denotes a hydrogen atom or a methyl group,
- R_4 , R_5 and R_6 , which may be identical or different, denote a C_1 to C_{18} alkyl group or a benzyl radical,
- A denotes a linear or branched C_1 - C_6 and preferably C_1 - C_4 alkylene group, or a C_1 - C_4 hydroxyalkylene group, and
- 10 - X^- denotes an anion, preferably a methosulfate anion or a halide such as a chloride or bromide.

According to one preferred embodiment, the cationic polymer(s) that can be used according to the invention comprise one or more units derived from a monomer of formula (II).

- 15 In particular, they comprise one or more units derived from a monomer of formula (V) below:



20 in which:

- R'_3 denotes a hydrogen atom or a methyl group, preferably a methyl group,
- R'_4 , R'_5 and R'_6 , which may be identical or different, each denote a C_1 to C_4 alkyl group, preferably a methyl group,

- A_1 denotes a linear or branched C_1 - C_4 alkylene group, preferably an ethylene group, and

- X_1^- denotes an anion, preferably a halide, particularly a chloride.

5 The cationic polymer(s) according to the invention may or may not be crosslinked.

In addition to the units derived from one or more acrylic acid- or methacrylic acid-based monomers, the cationic polymers according to the invention can comprise one or more additional units, in particular derived from monomers chosen from acrylamide, methacrylamide and vinylpyrrolidone.

10 Preferably, the cationic polymer(s) are chosen from homopolymers constituted of units derived from a monomer of structure (V), copolymers based on acrylamide and on monomers of structure (V), and mixtures thereof.

In other words, the cationic polymer(s) are preferably chosen from homopolymers resulting from the polymerization of monomers having structure (V),
15 copolymers resulting from copolymerization between at least one monomer having structure (V) and acrylamide, and mixtures thereof.

Among homopolymers based on polymerization of monomers having structure (V), methacryloyloxyethyl trimethyl ammonium chloride homopolymer, INCI name Polyquaternium-37 is preferred.

20 Among copolymers resulting from copolymerization between monomers having structure (V) and acrylamide, methacryloyloxyethyl trimethyl ammonium chloride/acrylamide copolymer, INCI name Polyquaternium-32, and the methacryloyloxyethyltrimethylammonium methylsulfate/acrylamide copolymer, INCI name Polyquaternium-5, are preferred.

25 Mention may also be made of copolymers based on acrylamide, on acrylic acid and on monomers of formula (III), in particular methacrylamidopropyltrimethylammonium chloride; among which mention may be made of Polyquaternium-53.

Mention may also be made of copolymers based on methyl acrylate, on acrylic
30 acid and on monomers of formula (III), in particular methacrylamidopropyltrimethylammonium chloride; among which mention may be made of Polyquaternium-47.

Preferably, the cationic polymer is the homopolymer of methacryloyloxyethyl trimethyl ammonium chloride, INCI name Polyquaternium-37.

Advantageously, the cationic polymer(s) that can be used according to the invention are present in a total amount ranging from 0.01% to 20% by weight, preferably from 0.1% to 15% by weight, preferentially from 0.2% to 10% by weight, and in particular from 0.25% to 5% by weight, relative to the total weight of the composition.

As indicated above, the composition according to the invention also comprises one or more liquid fatty substances.

The term "liquid fatty substance" is intended to mean a fatty substance that is liquid at ambient temperature (25°C) and at atmospheric pressure (760 mmHg or 1.013×10^5 Pa).

The term "fatty substance" according to the present application is intended to mean an organic compound that is insoluble in water at ambient temperature (25°C) and at atmospheric pressure (760 mmHg or 1.013×10^5 Pa), i.e. with a solubility of less than 5% by weight, preferably less than 1% by weight and more preferentially less than 0.1% by weight, in water.

In addition, the fatty substances are generally soluble in organic solvents under the same temperature and pressure conditions, for instance chloroform, dichloromethane, carbon tetrachloride, ethanol, benzene, toluene, tetrahydrofuran (THF), liquid petroleum jelly or decamethylcyclopentasiloxane.

Preferably, the liquid fatty substance(s) that can be used according to the invention are chosen from non-silicone liquid fatty substances.

The term "non-silicone liquid fatty substance" is intended to mean a liquid fatty substance not containing Si-O bonds.

The liquid fatty substances that can be used in the invention preferably have a viscosity of less than or equal to 2 Pa.s, better still less than or equal to 1 Pa.s and even better still less than or equal to 0.1 Pa.s at a temperature of 25°C and at a shear rate of 1 s^{-1} .

The liquid fatty substances generally have in their structure a hydrocarbon-based chain comprising at least 6 carbon atoms.

Preferably, the liquid fatty substance(s) that can be used according to the invention are chosen from hydrocarbons, fatty alcohols, fatty acid and/or fatty alcohol esters, non-salified fatty acids, and mixtures thereof.

The term “liquid hydrocarbon” is intended to mean a hydrocarbon composed solely of carbon and hydrogen atoms, which is liquid at ordinary temperature (25°C) and at atmospheric pressure (760 mmHg, i.e. 1.013×10^5 Pa).

More particularly, the liquid hydrocarbons are chosen from:

5 - linear or branched, optionally cyclic, C₆-C₁₆ alkanes. Examples that may be mentioned include hexane, undecane, dodecane, tridecane, and isoparaffins, for instance isohexadecane, isododecane and isodecane;

 - linear or branched hydrocarbons of mineral, animal or synthetic origin with more than 16 carbon atoms, such as liquid paraffins and derivatives thereof, petroleum jelly, liquid petroleum jelly, polydecenes, hydrogenated polyisobutene such as the product sold under the brand name Parleam[®] by the company NOF Corporation, and squalane.

10 Preferably, the liquid hydrocarbon(s) are chosen from liquid paraffins, isoparaffins, liquid petroleum jelly, undecane, tridecane and isododecane, and mixtures thereof.

15 In a most particularly preferred variant, the liquid hydrocarbon(s) are chosen from liquid petroleum jelly, isoparaffins, isododecane and a mixture of undecane and tridecane.

20 The term “liquid fatty alcohol” is intended to mean a non-glycerolated and non-oxyalkylenated fatty alcohol, which is liquid at standard temperature (25°C) and at atmospheric pressure (760 mmHg, i.e. 1.013×10^5 Pa). Preferably, the liquid fatty alcohols of the invention comprise from 8 to 30 carbon atoms and may be saturated or unsaturated.

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

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

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

5 Preferably, R' is a branched C₁₂-C₂₄ alkyl group, optionally substituted with one or more hydroxyls; better still, R' does not contain a hydroxyl group.

More particularly, the liquid fatty alcohols of the invention are chosen from octyldodecanol, 2-decyltetradecanol, isostearyl alcohol, 2-hexyldecanol, oleyl alcohol, linoleyl alcohol, linolenyl alcohol and undecylenyl alcohol.

10 Octyldodecanol, 2-decyltetradecanol and oleyl alcohol are most particularly preferred.

The term "liquid fatty ester" is intended to mean an ester derived from a fatty acid and/or from a fatty alcohol, which is liquid at standard temperature (25°C) and at atmospheric pressure (760 mmHg, i.e. 1.013×10^5 Pa).

15 More particularly, the liquid esters are chosen from esters of saturated or unsaturated, linear or branched C₁-C₂₆ aliphatic mono- or polyacids and from saturated or unsaturated, linear or branched C₁-C₂₆ aliphatic mono- or polyalcohols, the total number of carbon atoms in the esters being greater than or equal to 10.

Preferably, for the esters of monoalcohols, at least one from among the alcohol and the acid from which the esters of the invention are derived is branched.

20 Among the monoesters of monoacids and of monoalcohols, mention may be made of alkyl, in particular C₁-C₂₈ alkyl, palmitates, such as ethyl palmitate and isopropyl palmitate, alkyl, in particular C₁-C₂₈ alkyl, myristates such as isopropyl myristate or ethyl myristate, isocetyl stearate, 2-ethylhexyl isononanoate, isodecyl neopentanoate and isostearyl neopentanoate.

25 Esters of C₄-C₂₂ dicarboxylic or tricarboxylic acids and of C₁-C₂₂ alcohols and esters of monocarboxylic, dicarboxylic or tricarboxylic acids and of C₄-C₂₆ dihydroxy, trihydroxy, tetrahydroxy or pentahydroxy non-sugar alcohols may be used.

30 Mention may be made especially of diethyl sebacate, diisopropyl sebacate, diisopropyl adipate, di-n-propyl adipate, dioctyl adipate, diisostearyl adipate, dioctyl maleate, glyceryl undecylenate, octyldodecyl stearoyl stearate, pentaerythrityl monoricinoleate, pentaerythrityl tetraisnonanoate, pentaerythrityl tetrapelargonate, pentaerythrityl tetraisostearate, pentaerythrityl tetraoctanoate, propylene glycol dicaprylate, propylene glycol dicaprinate, tridecyl erucate, triisopropyl citrate, triisostearyl citrate, glyceryl trilactate, glyceryl trioctanoate, trioctyldodecyl citrate,

trioleoyl citrate, propylene glycol dioctanoate, neopentyl glycol diheptanoate, diethylene glycol diisononanoate and polyethylene glycol distearates.

Among the esters mentioned above, use is preferentially made of ethyl, isopropyl, myristyl, cetyl or stearyl palmitate, 2-ethylhexyl palmitate, 2-octyldecyl
5 palmitate, alkyl myristates such as isopropyl, butyl, cetyl or 2-octyldodecyl myristate, hexyl stearate, propylene glycol dicaprylate, butyl stearate, isobutyl stearate; dioctyl malate, hexyl laurate, 2-hexyldecyl laurate, isononyl isononanoate or cetyl octanoate.

Among the liquid fatty esters, use may be made of sugar esters and diesters of C_6 - C_{30} and preferably C_{12} - C_{22} fatty acids.

10 The term "sugar" is intended to mean oxygen-bearing hydrocarbon-based compounds containing several alcohol functions, with or without aldehyde or ketone functions, and which comprise at least 4 carbon atoms. These sugars may be monosaccharides, oligosaccharides or polysaccharides.

Preferably, these said sugars are chosen from sucrose, glucose, galactose,
15 ribose, fucose, maltose, fructose, mannose, arabinose, xylose and lactose, and derivatives thereof, especially alkyl derivatives, such as methyl derivatives, for instance methylglucose.

The sugar and fatty acid esters may be chosen especially from the group comprising the esters or mixtures of esters of sugars described previously and of linear
20 or branched, saturated or unsaturated C_6 - C_{30} and preferably C_{12} - C_{22} fatty acids.

If they are unsaturated, these compounds may comprise one to three conjugated or unconjugated carbon-carbon double bonds.

The esters according to this variant may also be chosen from mono-, di-, tri- and tetraesters, and polyesters, and mixtures thereof.

25 These esters may be, for example, oleates, laurates, palmitates, myristates, behenates, cocoates, stearates, linoleates, linolenates, caprates and arachidonates, and mixtures thereof, such as, especially, oleopalmitate, oleostearate or palmitostearate mixed esters.

More particularly, use is made of monoesters and diesters and especially of
30 sucrose, glucose or methylglucose mono- or dioleates, stearates, behenates, oleopalmitates, linoleates, linolenates or oleostearates, or alternatively of methylglucose dioleate (Glucate® DO).

Among the sugar esters, use may be made of pentaerythrityl esters, preferably pentaerythrityl tetraistearate, pentaerythrityl tetraoctanoate, and caprylic and capric acid hexaesters as a mixture with dipentaerythritol.

5 Among the natural or synthetic monoacid, diacid or triacid esters with glycerol, use may be made of plant oils or synthetic oils.

More particularly, said plant oil(s) or synthetic oil(s) are chosen from triglyceride oils of plant or synthetic origin, such as liquid fatty acid triglycerides containing from 6 to 30 carbon atoms, for instance heptanoic or octanoic acid triglycerides, or alternatively, for example, sesame oil, soybean oil, coffee oil, 10 safflower oil, borage oil, sunflower oil, olive oil, apricot kernel oil, camellia oil, bambara pea oil, avocado oil, mango oil, rice bran oil, cottonseed oil, rose oil, kiwi seed oil, sea buckthorn pulp oil, blueberry seed oil, poppy seed oil, orange pip oil, sweet almond oil, palm oil, coconut oil, vernonia oil, marjoram oil, baobab oil, rapeseed oil, ximenia oil, pracaxi oil, caprylic/capric acid triglycerides such as those 15 sold by the company Stéarineries Dubois or those sold under the names Miglyol® 810, 812 and 818 by the company Dynamit Nobel, jojoba oil and shea butter oil.

As liquid esters that may be used according to the invention, use is preferably made of triglycerides of plant origin, in particular oils chosen from avocado oil, olive oil, camellia oil and apricot kernel oil, and mixtures thereof, and C₄-C₂₂ dicarboxylic or tricarboxylic acid esters of C₁-C₂₂ alcohols, in particular 1,3-propanediol 20 dicaprylate.

The term "fatty acid" is intended to mean a non-salified fatty acid, i.e. the fatty acid must not be in the form of a generally soluble soap, i.e. it must not be salified with a base.

25 More particularly, the liquid fatty acids that may be used according to the invention are chosen from the acids of formula RCOOH, in which R is a saturated or unsaturated, linear or branched hydrocarbon-based radical, preferably comprising from 7 to 39 carbon atoms, which is optionally substituted with one or more hydroxyl groups and/or one or more carboxyl groups.

30 Preferably, R is a C₇-C₂₉ alkyl or C₇-C₂₉ alkenyl group and better still a C₁₂-C₂₄ alkyl or C₁₂-C₂₄ alkenyl group. R may be substituted with one or more hydroxyl groups and/or one or more carboxyl groups.

Preferentially, the liquid fatty acid(s) are chosen from oleic acid, linoleic acid and isostearic acid.

Most particular preferably, the liquid fatty substance(s) of the composition according to the invention are chosen from liquid fatty alcohols, liquid fatty esters, in particular plant oils, liquid hydrocarbons, and mixtures of these compounds.

Advantageously, the liquid fatty substance(s) of the composition according to the invention represent from 1% to 50% by weight, preferably from 2% to 40% by weight and more preferentially from 5% to 20% by weight relative to the total weight of the composition.

As indicated previously, the composition according to the invention also comprises water.

Advantageously, water represents from 50% to 99.5% by weight, preferably from 60% to 98% by weight and preferentially from 70% to 96% by weight, relative to the total weight of the composition.

The composition according to the invention can also comprise one or more organic solvents.

Preferably, the organic solvent(s) are chosen from C₁-C₆ non-aromatic alcohols such as ethyl alcohol or isopropyl alcohol, or aromatic alcohols such as benzyl alcohol and phenylethyl alcohol; polyols such as propylene glycol, butylene glycol or glycerol, or polyol ethers, for instance ethylene glycol monomethyl, monoethyl and monobutyl ethers, propylene glycol or ethers thereof, for instance propylene glycol monomethyl ether, butylene glycol, dipropylene glycol, and also diethylene glycol alkyl ethers, for instance diethylene glycol monoethyl ether or monobutyl ether.

When they are present in the composition of the invention, the organic solvent(s) generally represent from 0.1% to 15% by weight and preferably from 0.5% to 10% by weight relative to the total weight of the composition.

In one particular embodiment of the invention, the composition according to the invention also comprises one or more thickening polymers other than the polysaccharides, preferably chosen from associative thickening polymers other than the polysaccharides, better still from non-ionic associative thickening polymers other than the polysaccharides.

For the purposes of the present invention, the term "associative polymer" is intended to mean an amphiphilic polymer that is capable, in an aqueous medium, of reversibly combining with itself or with other molecules. It generally comprises, in its chemical structure, at least one hydrophilic region or group and at least one hydrophobic region or group.

The term "hydrophobic region or group" is intended to mean a hydrocarbon-based group or a polymer comprising a saturated or unsaturated, linear or branched hydrocarbon-based chain. When it denotes a hydrocarbon-based group, the hydrophobic group comprises at least 8 carbon atoms, preferably from 8 to 30 carbon atoms, in particular from 8 to 24 carbon atoms and preferentially from 10 to 24 carbon atoms. Preferentially, the hydrophobic group is derived from a monofunctional compound. By way of example, the hydrophobic group may be derived from a fatty alcohol, such as stearyl alcohol, dodecyl alcohol or decyl alcohol, or else from a polyalkylenated fatty alcohol, such as steareth-100. It may also denote a hydrocarbon-based polymer, for instance polybutadiene.

Preferably, the non-ionic thickening polymer(s) other than the polysaccharides that can be used in the composition of the invention are chosen from polyurethane polyethers comprising, in their chain, both hydrophilic blocks, which are usually polyoxyethylenated and hydrophobic blocks which may be aliphatic sequences alone and/or cycloaliphatic and/or aromatic sequences.

Preferably, the non-ionic associative polyurethane polyethers that can be used according to the invention comprise at least two lipophilic hydrocarbon-based chains having from 8 to 30 carbon atoms, especially from 10 to 20 carbon atoms, in particular from 12 to 26 carbon atoms, which are separated by a hydrophilic block, it being possible for the hydrocarbon-based chains to be pendent chains or chains at the end of the hydrophilic block. In particular, it is possible for one or more pendent chains to be envisaged. In addition, the polymer may comprise a hydrocarbon-based chain at one end or at both ends of a hydrophilic block. The hydrophilic block(s) are preferably polyoxyalkylenated, in particular polyoxyethylenated, chains comprising from 10 to 1000, especially from 20 to 500, in particular from 80 to 300, even better still from 100 to 300, oxyethylene groups.

The polyurethane polyethers may be multiblock, in particular in triblock form. The hydrophobic blocks may be at each end of the chain (for example: triblock copolymer bearing a hydrophilic central block) or distributed both at the ends and in the chain (for example, multiblock copolymer). These same polymers may also be graft polymers or star polymers.

The non-ionic polyurethane polyethers comprising a fatty chain can be triblock copolymers, the hydrophilic block of which is a polyoxyethylene chain comprising from 10 to 1000, especially from 20 to 500, in particular from 80 to 300,

even better still from 100 to 300, oxyethylene groups. The non-ionic polyurethane polyethers comprise a urethane bond between the hydrophilic blocks, hence the origin of the name.

By extension, the non-ionic fatty-chain polyurethane polyethers also include those with hydrophilic blocks bonded to the lipophilic blocks via other chemical bonds.

Mention may also be made, as examples of non-ionic fatty-chain polyurethane polyethers which can be used in the invention, of Rheolate 205 comprising a urea function, sold by Elementis, or else Rheolate 208, 204 or 212, and also Acrysol RM 184.

Mention may also be made of the product Elfacos T210 containing a C₁₂-C₁₄ alkyl chain, and the product Elfacos T212 containing a C₁₈ alkyl chain, from Akzo.

The product DW 1206B from Röhm & Haas having a C₂₀ alkyl chain and a urethane bond, provided at a solids content of 20% in water, may also be used.

Use may also be made of solutions or dispersions of these polymers, especially in water or in aqueous-alcoholic medium. Mention may be made, as examples of such polymers, of Rheolate 255, Rheolate 278 and Rheolate 244, sold by Elementis. Use may also be made of the products DW 1206F and DW 1206J sold by the company Röhm & Haas.

The polyurethane polyethers that may be used according to the invention are in particular those described in the article by G. Fonnum, J. Bakke and Fk. Hansen - *Colloid Polym. Sci.*, 271, 380-389 (1993).

In one particular embodiment of the invention, use may be made of a non-ionic associative polyurethane polyether that can be obtained by polycondensation of at least three compounds comprising (i) at least one polyethylene glycol comprising from 20 to 500, in particular from 50 to 400, or else from 80 to 350, even better still from 100 to 300 mol of ethylene oxide, (ii) a polyoxyethylenated linear or branched C₁₂-C₂₈, in particular C₁₄-C₂₆, alcohol comprising from 10 to 200, in particular from 10 to 150 mol of ethylene oxide and (iii) a diisocyanate.

According to a first variant, use may be made of a non-ionic associative polyurethane polyether that can be obtained by polycondensation of at least three compounds comprising (i) at least one polyethylene glycol comprising from 100 to 180 mol of ethylene oxide, (ii) a polyoxyethylenated stearyl alcohol comprising from 80 to 150 mol of ethylene oxide and (iii) a diisocyanate.

Mention may in particular be made of the polycondensate of polyethylene glycol containing 136 mol of ethylene oxide, stearyl alcohol polyoxyethylenated with 100 mol of ethylene oxide and hexamethylene diisocyanate (HDI) with a weight-average molecular weight (Mw) of 30 000 (INCI name: PEG-136/Steareth-100/HDI Copolymer).

Such a polymer is in particular provided by the company Elementis under the name Rheolate FX 1100® or Rheoluxe 811®.

According to another variant, use may be made of a non-ionic associative polyurethane polyether that can be obtained by polycondensation of at least three compounds comprising (i) at least one polyethylene glycol comprising from 200 to 300 mol of ethylene oxide, (ii) a polyoxyethylenated decyltetradecyl alcohol comprising from 10 to 50 mol of ethylene oxide and (iii) a diisocyanate. Mention may in particular be made of the polycondensate of polyethylene glycol containing 240 mol of ethylene oxide, polyoxyethylenated decyltetradecyl alcohol comprising 20 mol of ethylene oxide and hexamethylene diisocyanate (HDI) (INCI name: PEG-240/HDI Copolymer Bis-Decyltetradeceth-20 Ether). Such a polymer is for example sold under the name Adekanol Gt 730® by the company Adeka.

In another embodiment, use may also be made of a polyurethane polyether that can be obtained by polycondensation of at least three compounds comprising (i) at least one polyethylene glycol comprising from 100 to 300, in particular from 150 to 180 mol of ethylene oxide, (ii) a linear or branched C₈-C₂₈, in particular C₁₀-C₂₄, alcohol in particular stearyl alcohol or decyl alcohol, and (iii) at least one diisocyanate.

Such polyurethane polyethers are sold especially by Röhm & Haas under the names Aculyn 46 and Aculyn 44 [Aculyn 46 is a polycondensate of polyethylene glycol comprising 150 or 180 mol of ethylene oxide, of stearyl alcohol and of methylenebis(4-cyclohexyl isocyanate) (SMDI), at 15% by weight in a matrix of maltodextrin (4%) and water (81%); Aculyn 44 is a polycondensate of polyethylene glycol (PEG) comprising 150 or 180 mol of ethylene oxide, of decyl alcohol and of methylenebis(4-cyclohexyl isocyanate) (SMDI), at 35% by weight in a mixture of propylene glycol (39%) and water (26%)].

Preferably, the non-ionic associative polymers as described above have a number-average molecular weight of less than 500 000 and more preferentially still of less than 100 000, preferably ranging from 5000 to 80 000, which can be measured by

methods such as cryoscopy, osmotic pressure, ebullioscopy or titration of the end groups.

Preferentially, the non-ionic associative polymer(s), other than the polysaccharides, that can be used in the composition according to the invention are
5 chosen from non-ionic associative polyurethane polyethers, in particular those that can be obtained by polycondensation of at least three compounds comprising (i) at least one polyethylene glycol comprising from 100 to 180 mol of ethylene oxide, (ii) a polyoxyethylenated stearyl alcohol comprising from 80 to 150 mol of ethylene oxide and (iii) a diisocyanate, and those that can be obtained by polycondensation of at least
10 three compounds comprising (i) at least one polyethylene glycol comprising from 200 to 300 mol of ethylene oxide, (ii) a polyoxyethylenated decyltetradecyl alcohol comprising from 10 to 50 mol of ethylene oxide and (iii) a diisocyanate.

When they are present in the composition of the invention, the thickening polymer(s) other than the polysaccharides represent from 0.01% to 10% by weight,
15 better still from 0.02% 5% by weight and even more preferentially from 0.05% to 2% by weight, relative to the total weight of the composition.

In one particular embodiment, the composition according to the invention can also comprise one or more cationic surfactants, which are preferably non-silicone.

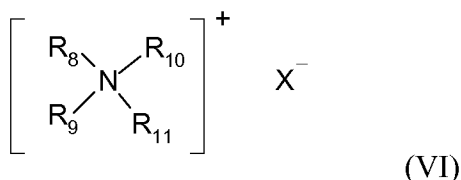
The term "cationic surfactant" is intended to mean a surfactant that is
20 positively charged when it is contained in a composition that may be used according to the invention. This surfactant may bear one or more positive permanent charges or may contain one or more cationizable functions within the composition according to the invention.

The cationic surfactant(s) are preferably chosen from primary, secondary or
25 tertiary fatty amines, which are optionally polyoxyalkylenated, or salts thereof, and quaternary ammonium salts, and mixtures thereof.

The fatty amines generally comprise at least one C₈-C₃₀ hydrocarbon-based chain.

Examples of quaternary ammonium salts that may especially be mentioned
30 include:

- those corresponding to the following general formula (VI):



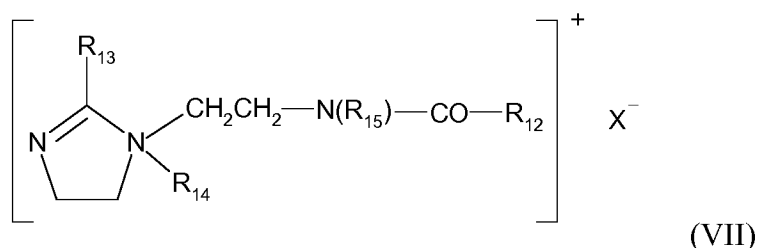
in which formula (VI):

the groups R_8 to R_{11} , which may be identical or different, represent a linear or branched aliphatic group comprising from 1 to 30 carbon atoms, or an aromatic group such as aryl or alkylaryl, at least one of the groups R_8 to R_{11} denoting a linear or branched aliphatic radical comprising from 8 to 30 carbon atoms, preferably from 12 to 24 carbon atoms. The aliphatic groups may comprise heteroatoms especially such as oxygen, nitrogen, sulfur and halogens. The aliphatic groups are chosen, for example, from C_1 - C_{30} alkyl, C_1 - C_{30} alkoxy, $(C_2$ - $C_6)$ polyoxyalkylene, C_1 - C_{30} alkylamide, $(C_{12}$ - $C_{22})$ alkylamido $(C_2$ - $C_6)$ alkyl, $(C_{12}$ - $C_{22})$ alkyl acetate, and C_1 - C_{30} hydroxyalkyl groups;

X^- is an anion chosen from the group of halides, phosphates, acetates, lactates, $(C_1$ - $C_4)$ alkyl sulfates, $(C_1$ - $C_4)$ alkylsulfonates and $(C_1$ - $C_4)$ alkylarylsulfonates.

Among the quaternary ammonium salts of formula (VI), the ones that are preferred are, on the one hand, tetraalkylammonium salts, for instance dialkyldimethylammonium or alkyltrimethylammonium salts in which the alkyl group comprises approximately from 12 to 22 carbon atoms, in particular behenyltrimethylammonium, distearyldimethylammonium, cetyltrimethylammonium or benzyldimethylstearyl ammonium salts, or, on the other hand, the palmitylamidopropyltrimethylammonium salts, the stearamidopropyltrimethylammonium salts, the stearamidopropyl dimethylcetarylammonium salts, or the stearamidopropyl dimethyl(myristyl acetate) ammonium salts sold under the name Ceraphyl® 70 by the company Van Dyk. It is preferred in particular to use the chloride salts of these compounds.

- quaternary ammonium salts of imidazoline, for instance those of formula (VII) below:



in which formula (VII):

5 R_{12} represents an alkenyl or alkyl group comprising from 8 to 30 carbon atoms, for example derived from tallow fatty acids,

R_{13} represents a hydrogen atom, a $\text{C}_1\text{-C}_4$ alkyl group or an alkenyl or alkyl group comprising from 8 to 30 carbon atoms,

R_{14} represents a $\text{C}_1\text{-C}_4$ alkyl group,

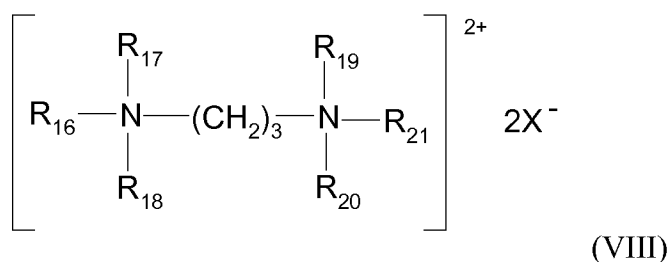
R_{15} represents a hydrogen atom or a $\text{C}_1\text{-C}_4$ alkyl group,

10 X^- is an anion chosen from the group of halides, phosphates, acetates, lactates, alkyl sulfates, alkyl- or alkylarylsulfonates in which the alkyl and aryl groups preferably comprise, respectively, from 1 to 20 carbon atoms and from 6 to 30 carbon atoms.

15 Preferably, R_{12} and R_{13} denote a mixture of alkenyl or alkyl groups comprising from 12 to 21 carbon atoms, for example derived from tallow fatty acids, R_{14} denotes a methyl group and R_{15} denotes a hydrogen atom.

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

- diquaternary or triquaternary ammonium salts of formula (VIII):



20

in which formula (VIII):

25 - R_{16} denotes an alkyl group comprising approximately from 16 to 30 carbon atoms, which is optionally hydroxylated and/or optionally interrupted with one or more oxygen atoms,

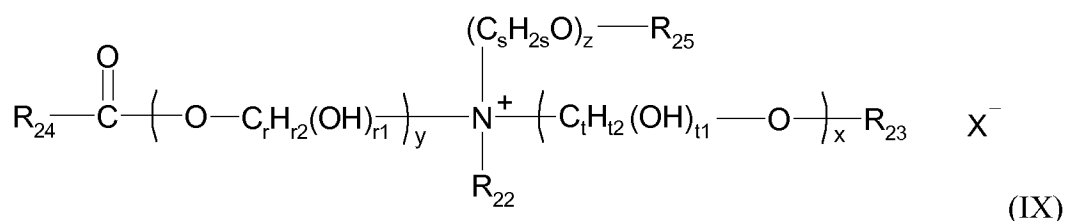
- R₁₇ denotes hydrogen, an alkyl group comprising from 1 to 4 carbon atoms or a group -(CH₂)₃-N⁺(R_{16a})(R_{17a})(R_{18a}); R_{16a}, R_{17a} and R_{18a}, which may be identical or different, denoting hydrogen or an alkyl group comprising from 1 to 4 carbon atoms,

- R₁₈, R₁₉, R₂₀ and R₂₁, which may be identical or different, denote hydrogen or an alkyl group comprising from 1 to 4 carbon atoms, and

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

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

- quaternary ammonium salts containing one or more ester functions, having formula (IX) below:



in which formula (IX):

- R₂₂ is chosen from C₁-C₆ alkyl groups and C₁-C₆ hydroxyalkyl or dihydroxyalkyl groups,

- R₂₃ is chosen from the group R₂₆-C(=O)-; linear or branched, saturated or unsaturated C₁-C₂₂ hydrocarbon-based groups R₂₇; and a hydrogen atom,

- R₂₅ is chosen from the group R₂₈-C(=O)-; linear or branched, saturated or unsaturated C₁-C₆ hydrocarbon-based groups R₂₉; and a hydrogen atom,

- R₂₄, R₂₆ and R₂₈, which may be identical or different, are chosen from linear or branched, saturated or unsaturated C₇-C₂₁ hydrocarbon-based groups,

- r, s and t, which may be identical or different, are integers ranging from 2 to 6,

- r₁ and t₁, which may be identical or different, are equal to 0 or 1,

- r₂ and t₂, which may be identical or different, are integers such that r₂+r₁=2r and t₁+t₂=2t,

- y is an integer ranging from 1 to 10,

- x and z, which may be identical or different, are integers ranging from 0 to 10, it being understood that the sum $x + y + z$ is from 1 to 15,

- X^- is an anion,

with the proviso that when $x = 0$ then R_{23} denotes R_{27} and that when $z = 0$
 5 then R_{25} denotes R_{29} .

The alkyl groups R_{22} may be linear or branched, preferably linear. Preferably, R_{22} denotes a methyl, ethyl, hydroxyethyl or dihydroxypropyl group, and more particularly a methyl or ethyl group.

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

10 When R_{23} is a hydrocarbon-based group R_{27} , it may comprise from 12 to 22 carbon atoms, or else may comprise from 1 to 3 carbon atoms.

When R_{25} is a hydrocarbon-based group R_{29} , it preferably contains 1 to 3 carbon atoms.

Advantageously, R_{24} , R_{26} and R_{28} , which may be identical or different, are
 15 chosen from linear or branched, saturated or unsaturated C_{11} - C_{21} hydrocarbon-based groups, and more particularly from linear or branched C_{11} - C_{21} alkyl and alkenyl groups.

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

Advantageously, y is equal to 1.

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

The anion X^- is preferably a halide, preferably chloride, bromide or iodide, a (C_1-C_4) alkyl sulfate, a (C_1-C_4) alkylsulfonate or a (C_1-C_4) alkylarylsulfonate, a methanesulfonate, a phosphate, a nitrate, a tosylate, an anion derived from organic acid
 25 such as an acetate or a lactate or any other anion that is compatible with the ammonium bearing an ester function. The anion X^- is more particularly a chloride, a methyl sulfate or an ethyl sulfate.

Use is more particularly made, according to the invention, of the ammonium salts of formula (IX) in which:

30 - R_{22} denotes a methyl or ethyl group,
 - x and y are equal to 1,
 - z is equal to 0 or 1,
 - r, s and t are equal to 2,
 - r2 and t2 are equal to 4,

- r_1 and t_1 are equal to 0,
- R_{23} is chosen from the group $R_{26}-C(=O)-$; methyl, ethyl or $C_{14}-C_{22}$ hydrocarbon-based groups, and a hydrogen atom,
- R_{25} is chosen from the group $R_{28}-C(=O)-$; a hydrogen atom,
- 5 - R_{24} , R_{26} and R_{28} , which may be identical or different, are chosen from linear or branched, saturated or unsaturated $C_{13}-C_{17}$ hydrocarbon-based groups, and preferably from linear or branched, saturated or unsaturated $C_{13}-C_{17}$ alkyl and alkenyl groups.

Advantageously, the hydrocarbon-based groups are linear.

- 10 Mention may be made, among the compounds of formula (IX), of diacyloxyethyltrimethylammonium, diacyloxyethylhydroxyethyltrimethylammonium, monoacyloxyethyldihydroxyethyltrimethylammonium, triacyloxyethyltrimethylammonium or monoacyloxyethylhydroxyethyltrimethylammonium salts, in particular the chloride or
- 15 the methyl sulfate, and mixtures thereof. The acyl groups preferably contain 14 to 18 carbon atoms and are derived more particularly from a plant oil such as palm oil or sunflower oil. When the compound contains several acyl groups, these groups may be identical or different.

- 20 These products are obtained, for example, by direct esterification of triethanolamine, triisopropanolamine, alkyldiethanolamine or alkyldiisopropanolamine, which are optionally oxyalkylenated, with fatty acids or with fatty acid mixtures especially of plant or animal origin, or by transesterification of the methyl esters thereof. This esterification may be followed by a quaternization by means of an alkylating agent such as an alkyl halide, preferably methyl or ethyl halide, a
- 25 dialkyl sulfate, preferably dimethyl or diethyl sulfate, methyl methanesulfonate, methyl para-toluenesulfonate, glycol chlorohydrin or glycerol chlorohydrin. Such compounds are sold, for example, under the names Dehyquat® by the company Henkel, Stepanquat® by the company Stepan, Noxanium® by the company Ceca or Rewoquat® WE 18 by the company Evonik.

- 30 The composition according to the invention may contain, for example, a mixture of quaternary ammonium monoester, diester and triester salts with a weight majority of diester salts. Use may also be made of the ammonium salts containing at least one ester function that are described in patents US-A-4 874 554 and US-A-4 137

180. Use may also be made of behenoylhydroxypropyltrimethylammonium chloride, for example, sold by the company Kao under the name Quartamin BTC 131.

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

5 The cationic surfactant(s) that may be present in the composition according to the invention can also be chosen from a mixture of the cationic surfactants of formulae (VI) to (IX) above.

Preferably, the cationic surfactant(s) are chosen from those of formula (VI) or (IX) and mixtures of these compounds, more preferentially from those of formula (VI) and mixtures of these compounds.

10 In a particularly preferred manner, the cationic surfactant(s) are chosen from cetyltrimethylammonium, behenyltrimethylammonium and dipalmitoylethylhydroxyethylmethylammonium salts and mixtures thereof; and in particular from cetyltrimethylammonium and behenyltrimethylammonium salts and mixtures thereof.

15 In a most particularly preferred manner, the cationic surfactant(s) are chosen from behenyltrimethylammonium chloride or methosulfate, cetyltrimethylammonium chloride or methosulfate, dipalmitoylethylhydroxyethylmethylammonium chloride or methosulfate, and mixtures thereof, and in particular from behenyltrimethylammonium chloride or methosulfate, and cetyltrimethylammonium chloride or methosulfate, and mixtures thereof.

20 When they are present in the composition of the invention, the cationic surfactant(s) advantageously represent a total content of from 0.05% to 15% by weight, preferably from 0.1% to 10% by weight and more preferentially from 1% to 5% by weight, relative to the total weight of the composition.

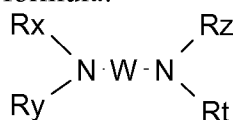
25 The pH of the composition of the invention is generally between 1 and 7, preferably between 2 and 6.5, better still between 3 and 6 and preferentially between 3.5 and 5.5.

30 The pH of the composition of the invention may be adjusted and/or stabilized by means of basifying agents and/or acidifying agents that are well known to those skilled in the art.

Basifying agents that may especially be mentioned include aqueous ammonia, alkali metal carbonates or bicarbonates, organic amines with a pK_b at 25°C of less than 12, in particular less than 10 and even more advantageously less than 6; among the

salts of the amines mentioned previously with acids such as carbonic acid or hydrochloric acid, it should be noted that it is the pKb corresponding to the function of highest basicity.

5 Preferably, the amines are chosen from alkanolamines, in particular comprising a primary, secondary or tertiary amine function, and one or more linear or branched C₁-C₈ alkyl groups bearing one or more hydroxyl radicals; from oxyethylenated and/or oxypropylenated ethylenediamines, and from amino acids and compounds having the following formula:



10

in which W is a C₁-C₆ alkylene residue optionally substituted with a hydroxyl group or a C₁-C₆ alkyl radical; Rx, Ry, Rz and Rt, which may be identical or different, represent a hydrogen atom or a C₁-C₆ alkyl, C₁-C₆ hydroxyalkyl or C₁-C₆ aminoalkyl radical.

15

Acidifying agents that may especially be mentioned include hydrochloric acid, (ortho)phosphoric acid, sulfuric acid, boric acid, and also carboxylic acids, for instance acetic acid, lactic acid or citric acid, or sulfonic acids.

The composition according to the invention may also comprise one or more additives.

20

As additives that can be used in accordance with the invention, mention may be made of cationic polymers other than the cationic polymers present in the composition the invention and mentioned above, anionic, non-ionic or amphoteric polymers other than the polysaccharides mentioned above, antidandruff agents, anti-seborrhoea agents, agents for preventing hair loss and/or for promoting hair regrowth, vitamins and provitamins including panthenol, sunscreens, mineral or organic pigments, sequestrants, plasticizers, solubilizers, opacifiers or nacreous agents, antioxidants, oxy acids, fragrances, preservatives, pigments and ceramides.

25

Those skilled in the art will take care to select the optional additives and the amount thereof such that they do not harm the properties of the composition according to the invention.

30

These additives may be present in the composition according to the invention in an amount ranging from 0 to 50% by weight, relative to the total weight of the composition.

5 Advantageously, the composition according to the invention is a hair composition, in particular a hair conditioning composition, such as a conditioner or a hair mask, to be rinsed off or left on.

The present invention also relates to a process for the cosmetic treatment of keratin materials, in particular keratin fibres, which comprises a step of applying the composition as described above to said materials.

10 The composition may be applied to dry or damp keratin fibres, and particularly to damp keratin fibres.

Preferably, the composition according to the invention is applied to damp keratin fibres, after applying a washing composition of the shampoo type.

15 The composition can be rinsed off after application to the keratin fibres; it can thus be in the form of a hair composition such as a conditioner, or a skin care and/or hygiene composition, such as a shower gel or a body milk to be rinsed off under the shower.

The composition can also be used in non-rinse-off mode, that is to say without a rinsing step after it has been applied to the keratin fibres.

20 The present invention also relates to the use of the composition as described above, for the cosmetic treatment of keratin materials, in particular keratin fibres, in particular the hair, and preferably for conditioning keratin fibres, in particular the hair.

The cosmetic treatment is preferably a conditioning care treatment.

25 The following examples serve to illustrate the invention without, however, exhibiting a limiting nature.

EXAMPLE 1

In the example that follows, all the amounts are given, unless otherwise indicated, as weight percentages relative to the total weight of the composition (AM: active material).

I. Composition tested

The following composition A was prepared from the ingredients of which the contents are indicated in table below.

Ingredients	A (% by weight)
PEG-40 hydrogenated castor oil	0.9
Steareth-20	0.6
Isopropyl myristate	5.4
Octyldodecanol	5.4
Polyquaternium-37 (Salcare SC 96)	0.53 AM
Hydroxypropyl starch phosphate	2.33
Hydroxyethylcellulose	2.23
Steareth-100/PEG-136/HDI Copolymer	0.28
Caprylyl glycol	0.3
Preservative, fragrance	qs
Water	qs 100%

II Evaluation of performance levels and results

Composition A is stable after 2 months of storage at 45°C. In particular, no drop in viscosity is observed.

5 The compositions of the invention are characterized by a viscoelastic behaviour. Under the effect of the shear, the compositions have the characteristics of a purely elastic material which stores energy and the characteristics of a purely viscous material which dissipates energy. This viscoelastic behaviour can be characterized by its modulus of rigidity G (parameter defined in the book “Initiation à la rhéologie” [“Initiation to rheology”], G. Couarraze and J.L. Grossiord, 2nd edition, 1991, published by Lavoisier-TecDoc.). This parameter is determined by measurements carried out at 25°C±0.5°C using a Haake Mars III imposed-stress rheometer from the company ThermoRhéo, equipped with a stainless steel spindle in sanded 1°±0.033° Cone/Plate geometry, the plate having a diameter of 60 mm and a gap of 0.052±0.005. The dynamic measurements are carried out by applying a harmonic variation of the stress. In these experiments, the amplitudes of the shear, the shear rate and the stress are low so as to remain within the limit of the linear viscoelastic range of the material (the conditions enabling the rheological characteristics of the composition to be evaluated at rest, that is to say non-destructively). The composition is subjected to a harmonic shear according to a stress $\tau(t)$ that varies sinusoidally according to an angular frequency ω ($\omega=2\pi\nu$, ν being the frequency of the applied shear). The composition thus sheared is subjected to a stress $\tau(t)$ and responds according to a strain $\gamma(t)$ corresponding to microstrains for which the modulus of rigidity varies little as a function of the stress imposed; this is the parameter G termed plateau (G_{pl}). The stress $\tau(t)$ and the strain $\gamma(t)$ are defined respectively by the following relationships:

$$\tau(t)=\tau_0\cos(\omega.t) \quad \gamma(t)=\gamma_0\cos(\omega.t-\delta)$$

20 τ_0 is the maximum amplitude of the stress and γ_0 is the maximum amplitude of the strain. δ is the phase angle between the stress and the strain. The measurement is carried out at the frequency of 1 Hz ($\nu=1$ Hz). The change in the modulus of rigidity G (ratio of τ_0 to γ_0) as a function of the stress $\tau(t)$ applied is thus measured.

The plateau modulus of rigidity G_{pl} of the composition changes little between the time 2 months at ambient temperature, $G_{pl} = 744$ Pa, and the time 2 months at 45°C, $G_{pl} = 671$ Pa. The change is not significant.

Composition A was tested in comparison to a conventional hair care composition B comprising in particular 4.7 g% of cationic surfactant (behentrimonium chloride), 1.7 g% of amodimethicone and 7 g% of solid fatty alcohol (cetearyl alcohol).

5 Each of the compositions was applied per half head on 6 models, in a proportion of 6 g of composition per half head, on prewashed hair.

The performance levels in terms of smoothness to the touch during rinsing and on wet hair, and disentangling on wet hair, were evaluated, by an expert, on a scale ranging from 0 (very poor) to 5 (very good) in increments of 0.5.

10 The means of the 6 scores obtained are given below:

	A (Inv.)	B (Comp.)	p-value (*)
Smoothness to the touch during rinsing	4.3	3.5	0.04
Smoothness to the touch on wet hair	4.3	3.5	0.03
Disentangling on wet hair	4.8	4.3	0.04

(*) determined by means of a Student's test

15 Composition A results in performance levels in terms of smoothness to the touch during rinsing and on wet hair, and of disentangling on wet hair, that are significantly higher than those of a conventional care composition B.

EXAMPLE 2

20

The following compositions C and D were prepared from the ingredients of which the contents are indicated in the table below (% by weight of AM).

Ingrédients	C (comparative)	D (invention)
Steareth-20	-	1
Isopropyl myristate	5.4	5.4
Octyldodecanol	5.4	5.4
Polyquaternium-37 (SALCARE SC 96)	0.53 AM	0.53 AM
Hydroxypropyl starch phosphate	1 AM	1 AM
Hydroxyethyl cellulose	1 AM	1 AM
Caprylyl glycol	0.3	0.,3
Preservative, fragrance	qs	qs
Water	qsp 100 %	qsp 100 %

In order to evaluate their stability, compositions C and D were stored for 10 days in an oven at high temperature (60°C).

5 The evolution of the appearance of each composition was assessed by observing the compositions under a microscope (LEICA DMRB interference contrast – Lens x10), just after their preparation and after the storage.

10 Composition D had a homogeneous aspect that did not evolve after the the 10 days of storage. The physical aspect of the composition did not change, and no exudation of oil was apparent.

 The microscopic observation of comparative composition C revealed the apparition of oil agglomerates within the composition and of oily exudates at the interface of the composition with the air after the 10 days of storage. This indicates that the oily phase has started to separate.

15 Thus, comparative composition C is less stable on storage than inventive composition D.

CLAIMS

1. Cosmetic composition comprising:
- a) one or more non-ionic surfactants,
 - b) one or more polysaccharides representing from 2% to 20% by weight,
 - 5 relative to the total weight of the composition,
 - c) one or more cationic polymers comprising one or more units derived from one or more acrylic acid- or methacrylic acid-based monomers,
 - d) one or more liquid fatty substances, and
 - e) water.
- 10 2. Composition according to Claim 1, characterized in that the non-ionic surfactant(s) are chosen from:
- oxyalkylenated (C₈-C₂₄)alkylphenols;
 - saturated or unsaturated, linear or branched, oxyalkylenated or glycerolated, preferably oxyalkylenated, C₈-C₄₀ alcohols;
 - 15 - saturated or unsaturated, linear or branched, oxyalkylenated C₈ to C₃₀ fatty acid amides;
 - esters of saturated or unsaturated, linear or branched, C₈ to C₃₀ acids and of polyethylene glycols;
 - preferably oxyethylenated esters of saturated or unsaturated, linear or
 - 20 branched, C₈ to C₃₀ acids and of sorbitol;
 - esters of fatty acids and of sucrose;
 - (C₈-C₃₀)alkyl(poly)glucosides, (C₈-C₃₀)alkenyl(poly)glucosides, which are optionally oxyalkylenated and which comprise from 1 to 15 glucose units, (C₈-C₃₀)alkyl(poly)glucoside esters;
 - 25 - saturated or unsaturated oxyethylenated plant oils;
 - condensates of ethylene oxide and/or of propylene oxide;
 - N-(C₈-C₃₀)alkylglucamine and N-(C₈-C₃₀)acylmethylglucamine derivatives;
 - aldobionamides;
 - amine oxides;
 - 30 - oxyethylenated and/or oxypropylenated silicones;
 - and mixtures thereof.
3. Composition according to Claim 1 or 2, characterized in that the non-ionic surfactant(s) are chosen from:

- saturated or unsaturated, linear or branched, oxyethylenated or glycerolated, preferably oxyethylenated, C₈ to C₄₀, preferably C₁₀-C₃₂, more preferentially C₁₂-C₂₈, alcohols,

- 5 - (C₈-C₃₀)alkyl(poly)glucosides, which are optionally oxyalkylenated and which comprise from 1 to 15 glucose units;
 - and a mixture thereof.

4. Composition according to any one of the preceding claims, characterized in that the non-ionic surfactant(s) represent from 0.01% to 20% by weight, preferably from 0.1% to 10% by weight, more preferentially from 0.3% to 5% by weight relative
10 to the total weight of the composition.

5. Composition according to any one of the preceding claims, characterized in that the polysaccharide(s) are chosen from:

- a) tree or shrub exudates, preferably gum arabic, ghatti gum, karaya gum and gum tragacanth;
15 b) gums derived from algae, preferably agar, alginates, carrageenans and furcellerans;
 c) gums derived from seeds or tubers, preferably guar gum, locust bean gum, fenugreek gum, tamarind gum and konjac gum;
 d) microbial gums, preferably xanthan gum, gellan gum and scleroglucan
20 gum;
 e) polymers extracted from plants, preferably chosen from celluloses, starches and inulin;
 f) mixtures of these compounds,
 these polysaccharides optionally being modified by a heat treatment, an
25 esterification reaction, an etherification reaction, an amidation reaction or an oxidation reaction.

6. Composition according to any one of the preceding claims, characterized in that the polysaccharide(s) are chosen from:

- 30 - celluloses;
 - starches, and
 - mixtures of these compounds,
 these polysaccharides being optionally modified by a heat treatment, an esterification reaction, an etherification reaction, an amidation reaction or an oxidation reaction,

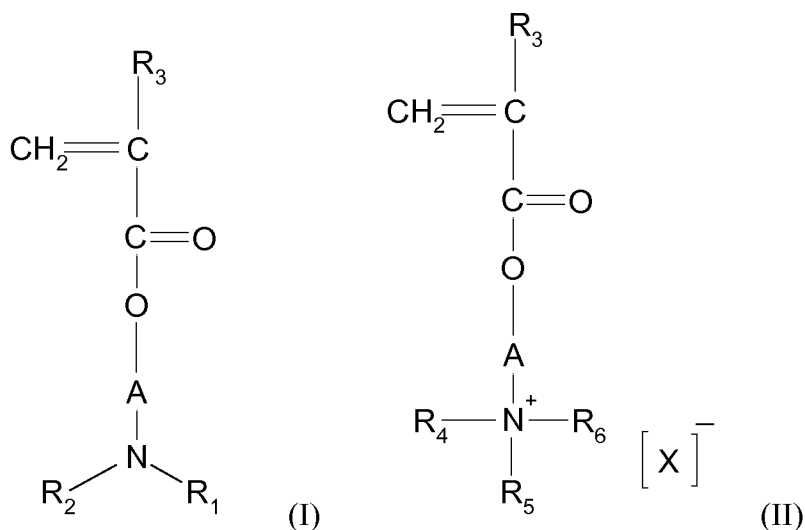
and more preferentially chosen from a mixture of one or more celluloses and of one or more starches, which may or may not be modified, better still from a mixture of one or more cellulose ethers, which are preferably non-ionic, and of one or more distarch phosphates.

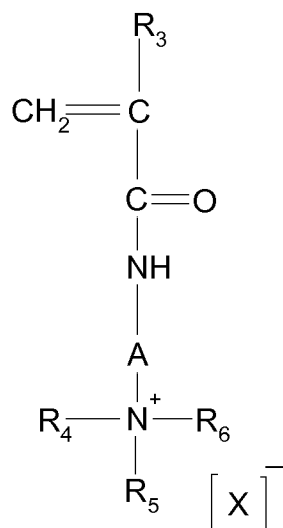
5 7. Composition according to any one of the preceding claims, characterized in that the polysaccharide(s) represent from 2% to 15% by weight and preferably from 3% to 10% by weight, relative to the total weight of the composition.

8. Composition according to any one of the preceding claims, characterized in that the weight ratio between the total amount of the polysaccharide(s) b) and the
10 total amount of the non-ionic surfactant(s) a) is between 0.1 and 15, preferably between 0.5 and 10, more preferentially between 1 and 5.

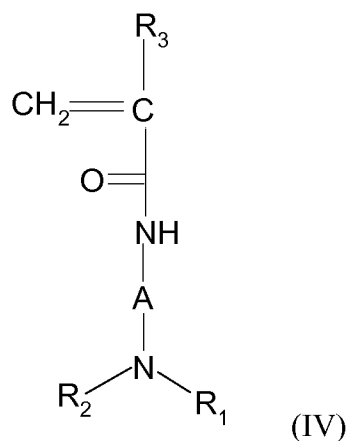
9. Composition according to any one of the preceding claims, characterized in that the cationic polymer(s) comprise one or more units derived from one or more monomers chosen from those having the following structures:

15





(III)



(IV)

in which:

- R₁ and R₂, which may be identical or different, denote a hydrogen atom or a C₁ to C₆ alkyl group, preferably a C₁ to C₄ alkyl group,
- 5 - R₃ denotes a hydrogen atom or a methyl group,
- R₄, R₅ and R₆, which may be identical or different, denote a C₁ to C₁₈ alkyl group or a benzyl radical,
- A denotes a linear or branched C₁-C₆ and preferably C₁-C₄ alkylene group, or a C₁-C₄ hydroxyalkylene group, and
- 10 - X⁻ denotes an anion, preferably a methosulfate anion or a halide such as a chloride or bromide.

10. Composition according to the preceding claim, characterized in that the cationic polymer(s) comprise one or more units derived from a monomer of formula (II), in particular comprise one or more units derived from a monomer of formula (V)

15 below:



in which:

- 20 - R'₃ denotes a hydrogen atom or a methyl group, preferably a methyl group,
- R'₄, R'₅ and R'₆, which may be identical or different, each denote a C₁ to C₄ alkyl group, preferably a methyl group,

- A₁ denotes a linear or branched C₁-C₄ alkylene group, preferably an ethylene group, and

- X₁⁻ denotes an anion, preferably a halide, particularly a chloride.

5 11. Composition according to one of the preceding claims, characterized in that the cationic polymer(s) are present in a total amount ranging from 0.01% to 20% by weight, preferably from 0.1% to 15% by weight, preferentially from 0.2% to 10% by weight, and in particular from 0.25% to 5% by weight, relative to the total weight of the composition.

10 12. Composition according to any one of the preceding claims, characterized in that the liquid fatty substance(s) are chosen from non-silicone liquid fatty substances, and preferably from liquid fatty alcohols, liquid fatty esters, in particular plant oils, liquid hydrocarbons, and mixtures of these compounds.

15 13. Composition according to any one of the preceding claims, characterized in that the liquid fatty substance(s) represent from 1% to 50% by weight, preferably from 2% to 40% by weight and more preferentially from 5% to 20% by weight relative to the total weight of the composition.

20 14. Composition according to any one of the preceding claims, characterized in that water represents from 50% to 99.5% by weight, preferably from 60% to 98% by weight and preferentially from 70% to 96% by weight relative to the total weight of the composition.

25 15. Composition according to any one of the preceding claims, characterized in that it also comprises one or more thickening polymers other than the polysaccharides, preferably chosen from associative polymers other than the polysaccharides, more preferentially from non-ionic associative polymers other than the polysaccharides, and in particular chosen from non-ionic associative polyurethane polyethers.

30 16. Process for the cosmetic treatment of keratin materials, in particular keratin fibres, comprising a step of applying a composition as defined in any one of the preceding claims, to said keratin materials.

17. Use of a composition as defined in any one of claims 1 to 15, for the cosmetic treatment of keratin materials, in particular keratin fibres, in particular the hair, and preferably for conditioning keratin fibres, in particular the hair.

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2018/081185

A. CLASSIFICATION OF SUBJECT MATTER		
INV.	A61K8/34 A61K8/86	A61K8/37 A61K8/87
	A61Q5/12 A61K8/92	A61K8/73 A61K8/06
		A61K8/81
ADD.		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) A61K A61Q		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 01/76543 A1 (PROCTER & GAMBLE [US]; SNYDER MICHAEL ALBERT [JP]; OHTSU KUMIKO [JP];) 18 October 2001 (2001-10-18) examples 2-6, 8-9, 11	1-17
X	----- DATABASE GNPD [Online] MINTEL; 1 October 2012 (2012-10-01), Korres Natural Products: "Acacia Milk Conditioner", XP002779178, Database accession no. 1911113 the whole document ----- -/--	1-17
☒ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
* Special categories of cited documents : "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 11 January 2019		Date of mailing of the international search report 23/01/2019
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer Paul Soto, Raquel

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2018/081185

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE GNPD [Online] MINTEL; 1 October 2017 (2017-10-01), L'Occitane: "Conditioner", XP002779179, Database accession no. 5168101 the whole document	1-17
A	----- DATABASE GNPD [Online] MINTEL; 1 July 2016 (2016-07-01), L'Oréal: "Crème Fundamental Nutrition Balm", XP002779180, Database accession no. 4017663 the whole document	1-17
A	----- DATABASE GNPD [Online] MINTEL; 1 April 2012 (2012-04-01), L'Oréal: "Restorative Night Treatment", XP002779181, Database accession no. 1767912 the whole document	1-17
A	----- NOVENA BIOMEDICAL: "Medicated Anti-Acne Essence", GNPD, MINTEL, 1 April 2012 (2012-04-01), XP002779053, the whole document	1-17
X	----- REDKEN: "Nourishing Toner Conditioner", GNPD, MINTEL, 1 June 2011 (2011-06-01), XP002779054, the whole document	1-17
X	----- AVON: "Conditioner", GNPD, MINTEL, 1 October 2016 (2016-10-01), XP002779055, the whole document	1-17
X	----- WO 02/055036 A2 (OREAL [FR]; FACK GERALDINE [FR]; POURILLE-GRETHEN CHRYSTEL [FR]; RESTL) 18 July 2002 (2002-07-18) page 14, line 1 - page 15, line 14 page 24, lines 10-14 page 25, line 20 - page 26, line 10 examples 1, 3-4 ----- -/--	1-17

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2018/081185

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	RICARDO PADILHA VIANNA-FILHO ET AL: "Rheological characterization of O/W emulsions incorporated with neutral and charged polysaccharides", CARBOHYDRATE POLYMERS., vol. 93, no. 1, 1 March 2013 (2013-03-01), pages 266-272, XP055540552, GB ISSN: 0144-8617, DOI: 10.1016/j.carbpol.2012.05.014 abstract Section "4. Conclusions"; page 271 -----	1-17
A	Hans Lautenschlaeger: "Kosmetik Konzept KOKO GmbH & Co", Kosmetische Praxis 2009 (4), 12-15, 23 September 2009 (2009-09-23), XP055540719, Retrieved from the Internet: URL:http://www.dermaviduals.de/cms/upload/Publikationen_english/KP-04-09-Polysaccharide-engl.pdf [retrieved on 2019-01-11] the whole document -----	1-17

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2018/081185

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0176543	A1	18-10-2001	AU 4071900 A 23-10-2001
		WO 0176543 A1	18-10-2001

WO 02055036	A2	18-07-2002	AT 352285 T 15-02-2007
		DE 60217822 T2	15-11-2007
		EP 1353634 A2	22-10-2003
		ES 2280513 T3	16-09-2007
		FR 2819404 A1	19-07-2002
		US 2004105832 A1	03-06-2004
		WO 02055036 A2	18-07-2002
