The present invention relates to a foaming composition which may be in the form of an aqueous gel comprising a combination of at least one anionic surfactant chosen from (C8-C30)acyl (Cl-C4)alkyl isethionates and at least one anionic surfactant chosen from (C8-C30) alkyl sulfoacetates. The said composition may advantageously also comprise at least one sulfosuccinate anionic surfactant and/or at least one anionic surfactant chosen from fatty acid sulfonates and fatty acid ester sulfonates. The invention also relates to a cosmetic process for treating keratin materials, especially a process for cleansing the skin or the hair, using the said composition.
Foaming composition comprising an acyl alkyl isethionate and an alkyl sulfoacetate, and cosmetic treatment process

The present invention relates to a foaming cleansing composition in the form of an aqueous gel comprising at least one anionic surfactant chosen from acyl (C1-C4)alkyl isethionates and at least one anionic surfactant chosen from alkyl sulfoacetates, and also to the use of the said composition especially in the cosmetic field, especially as products for cleansing or removing makeup from keratin materials such as the skin, keratin fibres (eyelashes and hair) or the scalp.

Cleansing of the skin is very important for facial care. It must be as effective as possible since fatty residues, such as excess sebum, the residues of cosmetic products used daily and makeup products accumulate in the skin folds and can block the skin pores and lead to the appearance of spots.

One way of satisfactorily cleansing the skin consists in using foaming cleansing products. The foaming cleansing products currently commercially available are in the form of foaming cakes, gels or creams. They generally contain either soaps, which have the advantage of giving a creamy foam but may cause tautness due to their excessive detergent power, or foaming surfactants such as sulfate surfactants, in particular sodium lauryl sulfate (SLS) or sodium laureth sulfates (SLES), or amphoteric surfactants, for instance cocoyl betaine, cocamidopropylbetaine or cocoamphodiacetate salts, which are highly efficient in terms of foam and of detergent power, but which are called into question, wrongly or rightly, because of their ecotoxic or ecologically unfriendly environmental profile.

Since the formulation of environmentally friendly cosmetic products is becoming a major challenge for satisfying a new expectation of consumers, in particular that of ecologically designed and/or natural products, it is necessary to propose foaming compositions free of sulfate surfactant and of amphoteric surfactant, which have good cosmetic qualities, mainly in terms of viscosity and of foam.

Moreover, foaming products may be thickened by means of a salt, for example sodium chloride, for certain surfactants, or by adding a thickener of alkyl-PEG type such as PEG-150 distearate or PEG-55 propylene glycol oleate, or by adding a gelling agent of natural gum type, in particular xanthan gum, scleroglucan gum or carrageenan gum.

Thickening with salt is a known approach that is widely used for surfactant systems containing sulfates and amphoteric substances, since it makes it possible both to be cheap and also not to impair the foam qualities; however, in general, it cannot significantly thicken sulfate-free and/or amphoteric substance-free systems. On the other hand, increasing the viscosity of the medium with another thickener or gelling agent is a more versatile approach, but often has a negative impact on the foam qualities of the formula (the start of foaming and the amount of foam).
It would therefore be worthwhile having available foaming compositions free of surfactants of sulfate or amphoteric type, which have a good viscosity obtained intrinsically or by addition of salt, and good foam qualities, especially the start of foaming and the amount of foam.

It has been discovered, surprisingly, that a combination of an anionic surfactant chosen from acyl alkyl isethionates and an anionic surfactant chosen from alkyl sulfoacetates makes it possible to obtain clear compositions, preferably of gel appearance, which are stable over time.

One subject of the present invention is thus a foaming composition, preferably in the form of an aqueous gel, comprising:
- at least one anionic surfactant chosen from (C8-C30)acyl (C1-C4)alkyl isethionates, present in a content ranging from 0.1 % to 20% by weight, relative to the total weight of the composition, and
- at least one anionic surfactant chosen from C8-C30 alkyl sulfoacetates.

The composition according to the invention makes it possible to obtain a clear foaming gel, which has a good level of viscosity and good cosmetic qualities, mainly foam qualities (start, quality, quantity), even with a low content of sulfate surfactants and of amphoteric surfactants or when the composition is free of such surfactants.

Furthermore, the addition of a salt to this type of composition, for example of NaCl, may lead to a significant increase in the viscosity.

Moreover, the composition is advantageously stable over time.

Since the composition according to the invention is intended for topical application, it contains a physiologically acceptable medium, i.e. a medium that is compatible with the skin, mucous membranes, the hair and the scalp.

In the present description, the expression "at least one" is equivalent to "one or more" and, unless otherwise indicated, the limits of a range of values are included in that range.

(C8-C30)Acyl (C1-C4)alkyl isethionate anionic surfactants

The composition according to the invention thus comprises one or more anionic surfactants chosen from (C8-C30)acyl (C1-C4)alkyl isethionates.

For the purposes of the present invention, the term "acyl" radical means a radical of formula R₁-CO₂⁻ with R₁ representing a linear or branched, saturated or unsaturated hydrocarbon-based chain, preferably comprising only carbon and hydrogen atoms. Preferably, it is linear and saturated.

The acyl radical of the acyl alkyl isethionate anionic surfactants comprises from 8 to 30 carbon atoms, preferably from 10 to 18 carbon atoms, preferentially from 10 to 16 carbon atoms and even better still from 10 to 14 carbon atoms. The said acyl
group may be chosen especially from lauroyl, myristoyl, palmitoyl, stearoyl, olivoyl, cocoyl and oleoyl groups, and mixtures thereof.

According to a particular embodiment, the (C8-C30)acyl (C1-C4)alkyl isethionate surfactants are chosen from the compounds of formula (I):

\[
\begin{array}{c}
R^1 - C - O - C - C - SO_3^- M^+ \\
R^2 & R^3 & R^4 & R^5
\end{array}
\]

in which:
- \(R^1\) is a linear or branched, saturated or unsaturated hydrocarbon-based chain, comprising from 7 to 29 carbon atoms, preferably from 9 to 17 carbon atoms, preferentially from 9 to 15 carbon atoms and better still from 9 to 13 carbon atoms;
- \(R^2, R^3, R^4\) and \(R^5\) represent, independently of each other, a hydrogen atom or a linear or branched alkyl group comprising from 1 to 4 carbon atoms, especially a methyl, ethyl, propyl or butyl group, in particular a methyl group; at least one of the radicals \(R^2, R^3, R^4\) or \(R^5\) representing an alkyl group comprising from 1 to 4 carbon atoms; and
- \(M^+\) denotes a hydrogen atom, an alkali metal such as Na, Li or K, preferably Na or K, an alkaline-earth metal such as Mg, or an ammonium group.

Preferably, \(R^1\) represents an alkyl group comprising from 7 to 29 carbon atoms, preferably from 9 to 17 carbon atoms, even more preferentially from 9 to 15 carbon atoms and better still from 9 to 13 carbon atoms. Preferably, \(R^1\)-CO- is a lauroyl group.

Preferably, at least one of the radicals \(R^4\) or \(R^5\) represents a linear or branched alkyl group comprising from 1 to 4 carbon atoms. Better still, at least one of the radicals \(R^4\) or \(R^5\) represents a linear alkyl group comprising from 1 to 4 carbon atoms. Even better still, at least one of the radicals \(R^4\) or \(R^5\) represents a methyl radical. Preferably, in this embodiment, \(R^2 = R^3 = H\).

Thus, according to a particular embodiment, \(R^4\) represents a linear or branched alkyl group comprising from 1 to 4 carbon atoms; better still a linear alkyl group comprising from 1 to 4 carbon atoms; even better still, \(R^4\) represents a methyl radical.

Preferentially, \(R^2, R^3\) and \(R^5\) represent a hydrogen atom and \(R^4\) represents a linear or branched, preferably linear, alkyl group, comprising from 1 to 4 carbon atoms; preferably chosen from methyl, ethyl, propyl and butyl; even better still, \(R^4\) represents a methyl group.
When the (C8-C30)acyl (C1-C4)alkyl isethionate surfactants are in salt form, these salts may be chosen from the salts of alkali metals such as Na, Li or K, preferably Na or K, from the salts of alkaline-earth metals such as Mg, and ammonium salts. Preferably, they are chosen from the salts of alkali metals and even more preferentially the sodium salt.

As examples of (C8-C30)acyl (C1-C4)alkyl isethionates that may be used in the context of the invention, mention may be made of lauroyl methyl isethionates, and especially sodium lauroyl methyl isethionates, such as the compound bearing the INCI name sodium lauroyl methyl isethionate, for instance the references Iselux LQ-CLR, Iselux LQ-CLR-SB or the sodium lauroyl methyl isethionate/sodium methyl isethionate mixture such as Iselux (pellets) sold by the company Innospec.

The cosmetic composition according to the invention comprises the (C8-C30)acyl (C1-C4)alkyl isethionate(s) in a content from 0.1% to 20% by weight, preferably from 0.5% to 17% by weight, better still from 1% to 15% by weight and even better still from 1.5% to 10% by weight, relative to the total weight of the said composition.

**Alkyl sulfoacetate anionic surfactants**

The composition according to the invention also comprises one or more anionic surfactants chosen from C8-C30 alkyl sulfoacetates. The alkyl radical of the said alkyl sulfoacetates comprises from 8 to 30 carbon atoms, preferably from 10 to 18 carbon atoms, preferentially from 10 to 16 carbon atoms and even better still from 10 to 14 carbon atoms.

According to a particular embodiment, the alkyl sulfoacetate surfactants correspond to formula (II) below:

\[ M'\text{SO}_3\text{-CH}_2\text{-CO-O-(CH}_2\text{)}_x\text{-CH}_3 \]

in which:

- \( x \) denotes an integer ranging from 7 to 29, preferably from 9 to 17, preferentially from 9 to 15 and better still from 9 to 13; and
- \( M' \) denotes a hydrogen atom, an alkali metal, an alkaline-earth metal, an ammonium group or a cation derived from an amine.

When the alkyl sulfoacetates are in salt form, they may be chosen from alkali metal salts such as the sodium or potassium salt and preferably the sodium salt, ammonium salts, amine salts and in particular amino alcohol salts or alkaline-earth metal salts such as the magnesium salts.

According to a particular embodiment, the alkyl sulfoacetate(s) are in salt form. Preferably, they are chosen from the salts of alkali metals and more particularly the sodium salt.
According to a particular embodiment, the anionic surfactant chosen from alkyl sulfoacetates is sodium lauryl sulfoacetate, such as the product sold under the name Lathanol LAL by the company Stepan.

Preferably, the cosmetic composition according to the invention comprises the C8-C30 alkyl sulfoacetate(s) in a content from 0.1 % to 30 % by weight, preferably from 0.2 % to 25 % by weight, even better still from 0.5 % to 20 % by weight, or even from 1 % to 15 % by weight, preferentially from 1.5 % to 15 % by weight and even better still from 2 % to 10 % by weight, relative to the total weight of the composition.

Additional sulfosuccinate anionic surfactants

According to a particular embodiment, the composition according to the invention may also comprise one or more additional anionic surfactants chosen from sulfosuccinates.

The said sulfosuccinate anionic surfactants may be oxyalkylenated and then preferably comprise from 1 to 50 ethylene oxide units and better still from 1 to 10 ethylene oxide units.

The said sulfosuccinate anionic surfactants may be chosen from optionally oxyalkylenated (C8-C30)alkyl sulfosuccinates and (C8-C30)alkylamide sulfosuccinates; preferably, they are optionally oxyalkylenated (C8-C30)alkyl sulfosuccinates, i.e. (C8-C30)alkyl sulfosuccinates or (C8-C30)alkyl ether sulfosuccinates. The alkyl radical of the sulfosuccinates thus preferably comprises from 8 to 30 carbon atoms, better still from 10 to 18 carbon atoms, preferentially from 10 to 16 carbon atoms and even better still from 10 to 14 carbon atoms.

Non-oxyalkylenated alkyl sulfosuccinates that may be mentioned include lauryl alcohol sulfosuccinates (70/30 C12/C14) (Disodium lauryl sulfosuccinate) such as the products sold under the name Rewopol® SB F 12 P by the company Evonik, Kohacool L-40 by the company Toho Chemical, or Mackanate LO-FF by the company Rhodia.

Oxyalkylenated alkyl sulfosuccinates that may be mentioned include oxyethylenated lauryl alcohol sulfosuccinates (70/30 C12/C14) (Disodium laureth sulfosuccinate) such as the products sold under the names Setacin 103 Special NP® by the company Zschimmer&S Schwarz, Rewopol SB FA 30 U by the company Evonik, Goodway MES by the company Shanghai Goodway Chemical, Rewopol SB FA 30 PH by the company Evonik, Alkonix SS K by the company Ultra-Oxiteno, Disodium laureth sulfosuccinate by the company Guangzhou Flower's Song Fine Chemical, Kohacool L-300 by the company Toho Chemical, Empicol SDD OF by the company Huntsman, the disodium salt of a hemisulfosuccinate of C12-C14 alcohols, sold especially under the name Setacin F Special Paste® by the company Zschimmer Schwarz, the oxyethylenated (2 EO) disodium oleamidosulfosuccinate sold under the name Standapol SH 135® by the company Cognis, the oxyethylenated (5 EO) laurylamide monosulfosuccinate sold under the name Lebon A-5000® by the company Sanyo, the oxyethylenated (10 EO) disodium salt of lauryl citrate mono-
sulfosuccinate sold under the name Rewopol SB CS 50® by the company Witco, and the ricinoleic monoethanolamide monosulfosuccinate sold under the name Rewoderm S 1333® by the company Witco. Polydimethylsiloxane sulfosuccinates may also be used, such as disodium PEG-12 dimethicone sulfosuccinate sold under the name Mackanate-DC30® by the company MacIntyre.

According to a particular embodiment, the sulfosuccinate anionic surfactants correspond to formula (III) below:

\[ \text{CH}_3(\text{CH}_2)_n(\text{OCH}_2\text{CH}_2)_m\cdot\text{O}-\text{CO}-\text{CH}(\text{SO}_3\text{M})\text{CH}_2\text{COOM}' \]

in which:
- \( n \) denotes an integer ranging from 7 to 29, preferably from 9 to 17, preferentially from 9 to 15 and preferably from 9 to 13;
- \( m \) denotes an integer ranging from 0 to 50;
- \( M \) and \( M' \) denote, independently of each other, a hydrogen atom, an alkali metal, an alkaline-earth metal, an ammonium group or a cation derived from an amine.

When the sulfosuccinate anionic surfactants are not oxyalkylated, \( m \) is equal to 0.

When the sulfosuccinate anionic surfactants are oxyalkylated, \( m \) denotes an integer ranging from 1 to 50, preferably from 1 to 10, even more preferentially from 1 to 8 and preferably from 1 to 6.

When the sulfosuccinates are in salt form, they may be chosen from alkali metal salts such as the sodium or potassium salt and preferably the sodium salt, ammonium salts, amine salts and in particular amino alcohol salts or alkaline-earth metal salts such as the magnesium salts. In this case, one or other of the sulfonate functions, or both of them, may be in salt form.

According to a particular embodiment of the invention, the sulfosuccinates are in salt form. Preferably, they are chosen from the salts of alkali metals and even more particularly the sodium salt. Preferably, these are disodium salts.

According to a particular embodiment, the sulfosuccinate anionic surfactants are optionally oxyalkylated alkyl sulfosuccinates in which the alkyl radical comprises from 8 to 30 carbon atoms, preferably from 10 to 18 carbon atoms, even more preferentially from 10 to 16 carbon atoms and preferably from 10 to 14 carbon atoms; preferentially, it is a lauryl or laureth sulfosuccinate, even better still an alkali metal salt of lauryl or laureth sulfosuccinate, and even more preferentially disodium lauryl sulfosuccinate or disodium laureth sulfosuccinate.

Preferably, the cosmetic composition according to the invention comprises the sulfosuccinate(s), when they are present, in a content ranging from 0.4% to 30% by weight, preferably from 0.5% to 25% by weight, better still from 0.6% to 25% by weight, even better still from 1% to 20% by weight, preferentially from 1.5% to 15% by weight and even better still from 2% to 10% by weight, relative to the total weight of the composition.
Additional fatty acid sulfonate or fatty acid ester sulfonate anionic surfactants

According to a particular embodiment, the composition may also comprise one or more additional anionic surfactants chosen from fatty acid sulfonates and fatty acid ester sulfonates.

The fatty acid sulfonates and fatty acid ester sulfonates that may be used in the context of the invention preferably comprise an alkyl radical containing 8 to 30 carbon atoms, preferably 10 to 18 carbon atoms, even more preferentially from 10 to 16 carbon atoms and better still from 10 to 14 carbon atoms.

According to a particular embodiment, the fatty acid sulfonates and/or fatty acid ester sulfonates correspond to formula (IV) below:

\[ \text{CH}_3(\text{CH}_2)_x\text{CH}(\text{SO}_3\text{M})\text{-COOY} \]

in which:

- x denotes an integer ranging from 7 to 29, preferably from 9 to 17, even more preferentially from 9 to 15 and better still from 9 to 13;
- M denotes a hydrogen atom, an alkali metal, an alkaline-earth metal, an ammonium group or a cation derived from an amine, and
- Y represents a hydrogen atom, a C\(_1\)-C\(_4\) alkyl radical such as a methyl or ethyl radical, or an alkali metal or alkaline-earth metal.

When the sulfonate function of the fatty acid sulfonate(s) or fatty acid ester sulfonate\(^a\) is in salt form, it may be chosen from alkali metal salts such as the sodium or potassium salt and preferably the sodium salt, ammonium salts, amine salts and in particular amino alcohol salts or alkaline-earth metal salts such as the magnesium salts.

According to a particular embodiment of the invention, the sulfonate function of the fatty acid sulfonate(s) or fatty acid ester sulfonate(s) is in salt form. Preferably, they are chosen from the salts of alkali metals and even more particularly the sodium salt.

According to a particular embodiment, the fatty acid sulfonate(s) or fatty acid ester sulfonate(s) used in the context of the invention are derived from lauric acid. Mention may be made especially of sodium 2-methyl sulfolaurate (INCI name: Sodium methyl-2 sulfolaurate) and disodium 2-sulfolaurate (INCI name: Disodium 2-sulfolaurate), used alone or as a mixture.

According to a particular embodiment, they are fatty acid sulfonates and Y represents a hydrogen atom, an alkali metal or an alkaline-earth metal.

According to another particular embodiment, they are fatty acid ester sulfonates and Y represents a C\(_1\)-C\(_4\) alkyl radical such as a methyl or ethyl radical.

Preferably, the cosmetic composition according to the invention comprises the fatty acid sulfonate(s) and/or fatty acid ester sulfonate(s), when they are present, in a content from 0.5% to 30% by weight, preferably from 1% to 25% by weight, pref-
erentially from 1.5% to 20% by weight and even better still from 2% to 15% by weight, relative to the total weight of the composition.

In the context of the invention, as alkyl sulfoacetates and fatty acid sulfonates or fatty acid ester sulfonates, it is also possible to use the mixture of sodium lauryl sulfoacetate, sodium methyl-2 sulfolaurate and disodium 2-sulfolaurate sold under the name Stepan-Mild PCL by the company Stepan.

In the context of the invention, as alkyl sulfoacetates and sulfosuccinates, it is also possible to use the mixture of sodium lauryl sulfoacetate and disodium lauryl ether sulfosuccinate (50/50) at 25% in water, sold under the name Stepan-Mild LSB by the company Stepan.

**Additional surfactants**

The composition according to the invention may comprise, besides the anionic surfactants chosen from (C8-C30)acyl (C1-C4)alkyl isethionates, the alkyl sulfoacetates, the sulfosuccinates, the fatty acid sulfonates and the fatty acid ester sulfonates, one or more other additional surfactants, which may be advantageously chosen from nonionic surfactants, amphoteric surfactants and anionic surfactants; preferably from nonionic surfactants and anionic surfactants.

According to a particular embodiment, the said other additional surfactants are foaming surfactants. Foaming surfactants are detergents and differ from emulsifying surfactants by their HLB (hydrophilic lipophilic balance) value, the HLB being the ratio between the hydrophilic part and the lipophilic part in the molecule. The term "HLB" is well known to a person skilled in the art and is described, for example, in "The HLB system. A time-saving guide to Emulsifier Selection" (published by ICI Americas Inc.; 1984).

For emulsifying surfactants, the HLB generally ranges from 3 to 8 for the preparation of water-in-oil (W/O) emulsions and from 8 to 18 for the preparation of oil-in-water (O/W) emulsions, whereas foaming surfactants generally have an HLB of greater than 18 and better still greater than 20.

In particular, the said other additional surfactants other than the anionic surfactants chosen from the acyl (C1-C4) alkyl isethionates, the alkyl sulfoacetates, the fatty acid sulfonates and the fatty acid ester sulfonates may be chosen from the following surfactants.

a) Other additional anionic surfactants

The anionic surfactants may be chosen, for example, from soaps (fatty acid salts), carboxylates other than sulfosuccinates, acylamino acids, amido ether carboxylates, alkyl polyaminocarboxylates, isethionates, alkyl methyl taurates and alkyl phosphates (monoalkyl or dialkyl phosphates), salts thereof, and mixtures thereof.
The soaps are obtained from a fatty acid which is partially or completely saponified (neutralized) with a basic agent. These are alkali metal or alkaline-earth metal soaps or soaps of organic bases. Use may be made, as fatty acids, of saturated, linear or branched fatty acids comprising from 8 to 30 carbon atoms and preferably comprising from 8 to 22 carbon atoms. This fatty acid can be chosen in particular from palmitic acid, stearic acid, myristic acid, lauric acid and mixtures thereof. Use may be made, as basic agents, for example, of alkali metal hydroxides (sodium hydroxide and potassium hydroxide), alkaline-earth metal hydroxides (for example magnesium hydroxide), ammonium hydroxide or else organic bases, such as triethanolamine, N-methylglucamine, lysine and arginine.

The soaps can in particular be fatty acid alkali metal salts, the basic agent being an alkali metal hydroxide and preferably potassium hydroxide (KOH).

The amount of basic agent must be sufficient for the fatty acid to be at least partially neutralized.

Carboxylates that may especially be mentioned include alkyl glycol carboxylic acids (or 2-(2-hydroxyalkyloxyacetic acids)) and salts thereof, for instance sodium lauryl glycol carboxylate, sold under the names Beaulight Shaa® or Beaulight LCA-25N® by the company Sanyo (CTFA name: Sodium lauryl glycol carboxylate), or its corresponding acid form sold under the name Beaulight Shaa (Acid Form)® by the company Sanyo.

Examples of acylamino acids that may be mentioned include sodium cocoylglycinate sold by the company Ajinomoto under the name Amilite GCS 12, sodium lauroyi glutamate sold by the company Ajinomoto under the name Amisoft LS1 1 and sodium lauroyi sarcosinate sold by the company SEPPIC under the name Oramix L30.

An example of an alkyl phosphate that may be mentioned is lauryl phosphate, sold by the company Kao under the name MAP 20.

The amount of the said other additional anionic surfactants preferably ranges from 0.1% to 15% by weight, better still from 0.5% to 10% by weight and even better still from 0.5% to 5% by weight relative to the total weight of the composition.

Preferably, the said other additional anionic surfactant is chosen from acylamino acids, for example the sodium cocoyl glycinate sold by the company Ajinomoto under the name Amilite GCS 12, the sodium lauroyi glutamate sold by the company Ajinomoto under the name Amisoft LS1 1 and the sodium lauroyi sarcosinate sold by the company SEPPIC under the name Oramix L30, and in particular sodium cocoyl glycinate, and mixtures thereof.

b) Additional amphoteric surfactants

The amphoteric surfactants may be chosen from betaine derivatives. The term "amphoteric" includes here both amphoteric surfactants and zwitterionic surfactants.
Examples of betaine derivatives that may be mentioned include cocoyl betaine, for instance the product sold under the name Dehyton AB-30® by the company Cognis; lauryl betaine, for instance the product sold under the name Genagen KB® by the company Clariant; oxyethylated (10 EO) lauryl betaine, for instance the product sold under the name Lauryl ether (10 EO) betaine® by the company Shin Nihon Rica; oxyethylated (10 EO) stearyl betaine, for instance the product sold under the name Stearyl ether (10 EO) betaine® by the company Shin Nihon Rica; the cocamidopropyl betaine sold, for example, under the name Velvetex BK 35® by the company Cognis; the undecylenamidopropyl betaine sold, for example, under the name Amphoram U® by the company Ceca; and mixtures thereof.

Preferably, the amphoteric surfactants are present in the composition in a content of less than or equal to 2.5% by weight and preferably less than or equal to 2% by weight, relative to the total weight of the composition. Above a content of 2.5% by weight of amphoteric surfactant, destabilization of the composition is generally observed.

Preferably, the content of amphoteric surfactant(s) may range from 0.1% to 2.5% by weight and better still from 0.5% to 2% by weight, relative to the total weight of the composition.

c) Additional nonionic surfactants

The composition according to the invention may also comprise one or more nonionic surfactants chosen, for example, from alkylpolyglycosides (APG), maltose esters, polyglycerolated fatty alcohols, and glucamine derivatives such as 2-ethylhexyloxycarbonyl-N-methylglucamine, and mixtures thereof.

Use is preferably made, as alkyl polyglycosides, of those comprising an alkyl group comprising from 6 to 30 carbon atoms and preferably from 8 to 16 carbon atoms and comprising a hydrophilic (glucoside) group preferably comprising from 1.2 to 3 saccharide units. Examples that may be mentioned include decyglucoside (Alkyl-C9/C1 1-polyglucoside (1.4)), for instance the product sold under the name Mydol 10® by the company Kao Chemicals, the product sold under the name Plantaren 2000 UP® by the company Cognis, and the product sold under the name Oramix NS 10® by the company SEPPIC; caprylyl/capryl glucoside, for instance the product sold under the name Oramix CG 110® by the company SEPPIC; laurylglucoside, for instance the products sold under the names Plantaren 1200 N® and Plantacare 1200® by the company Cognis; cocoglucoside, for instance the product sold under the name Plantacare 8 18/UP® by the company Cognis; cetostearyl glucoside optionally as a mixture with cetostearyl alcohol, sold, for example, under the name Montanov 68 by the company SEPPIC, under the name Tego-Care CG90 by the company Goldschmidt and under the name Emulgade KE3302 by the company Henkel; arachidyl glucoside, for example in the form of the mixture of arachidyl alcohol and behenyl alcohol and arachidyl glucoside, sold under the name Montanov 202 by
the company SEPPIC; cocoylethylglucoside, for example in the form of the mixture (35/65) with cetyl alcohol and stearyl alcohol, sold under the name Montanov 82 by the company SEPPIC; and mixtures thereof. The maltose derivatives are, for example, those described in document EP-A-566 438, such as O-octanoyl-6'-D-maltose or O-dodecanoyl-6'-D-maltose described in document FR-2 739 556. Among the polyglycerolated fatty alcohols that may be mentioned is polyglycerolated dodecanediol (3.5 mol of glycerol), this product being sold under the name Chimexane NF® by the company Chimex.

According to a preferred embodiment of the invention, the nonionic surfactants are chosen from alkyl polyglycosides. Nonionic surfactants that may also be used include PEG-120 methylglucose dioleate, for instance Glucamate DOE 120 from the company Noveen or PEG-1 50 pentaeerythrityl tetrastearate, for instance Crothix from the company Croda. The content of nonionic surfactant(s) preferably ranges from 0.1 % to 10% by weight, better still from 1% to 5% by weight and better still from 1% to 3% by weight relative to the total weight of the composition.

According to a particular embodiment of the invention, the total amount of surfactants present in the composition according to the invention is between 1% and 40% by weight, preferably between 3% and 35% by weight, even more preferentially between 5% and 30% by weight and better still between 7% and 20% by weight, or even between 7% and 15% by weight, relative to the total weight of the composition.

According to a particular embodiment, the composition according to the invention is free of sulfate surfactants and of amphoteric surfactants. For the purposes of the present invention, the expression "free of sulfate surfactants and of amphoteric surfactants" means a composition comprising an amount of sulfate surfactants and of amphoteric surfactants between 0 and 1% by weight and preferably between 0 and 0.5% by weight, relative to the total weight of the composition.

According to a particular embodiment, the composition according to the invention comprises less than 1% and preferably less than 0.5% of additional surfactants other than the anionic surfactants chosen from acyl (C1-C4)alkyl isethionates and alkyl sulfoacetates; in particular it is free of additional surfactants other than the acyl (C1-C4)alkyl isethionates and the alkyl sulfoacetates.

According to a particular embodiment, the composition according to the invention also comprises at least one sulfo succinate anionic surfactant. Preferably, it then comprises less than 1% and preferably less than 0.5% of additional surfactants other than the anionic surfactants chosen from acyl (C1-C4)alkyl isethionates, alkyl sulfoacetates and sulfo succinates; in particular it is free of additional surfactants other than the acyl (C1-C4)alkyl isethionates, the alkyl sulfoacetates and the sulfo succinates.
According to a particular embodiment, the composition according to the invention also comprises at least one anionic surfactant chosen from fatty acid sulfonates and fatty acid ester sulfonates. Preferably, it then comprises less than 1% and preferably less than 0.5% of additional surfactants other than the anionic surfactants chosen from acyl \((C1-C4)\)alkyl isethionates, alkyl sulfoacetates, fatty acid sulfonates and fatty acid ester sulfonates; in particular it is free of additional surfactants other than the acyl \((C1-C4)\)alkyl isethionates, the alkyl sulfoacetates, the fatty acid sulfonates and the fatty acid ester sulfonates.

According to another particular embodiment, the composition comprises anionic surfactants chosen from acyl \((C1-C4)\)alkyl isethionates, alkyl sulfoacetates and optionally sulfosuccinates and/or fatty acid sulfonates and fatty acid ester sulfonates as predominant surfactants. Preferably, the composition in accordance with the invention comprises as sole surfactants anionic surfactants chosen from acyl \((C1-C4)\)alkyl isethionates, alkyl sulfoacetates and optionally sulfosuccinates and/or fatty acid sulfonates and fatty acid ester sulfonates.

In the context of the present invention, the term "predominant surfactant" means that, in the case where the composition contains additional surfactants other than the anionic surfactants chosen from the acyl \((C1-C4)\)alkyl isethionates, the alkyl sulfoacetates, and optionally the sulfosuccinates and/or the fatty acid sulfonates and the fatty acid ester sulfonates, they are always present in a total weight amount less than the total weight amount of the anionic surfactants chosen from the acyl \((C1-C4)\)alkyl isethionates, the alkyl sulfoacetates, and optionally the sulfosuccinates and/or the fatty acid sulfonates and the fatty acid ester sulfonates.

**Aqueous phase**

The composition according to the invention comprises an aqueous phase. Accordig to a particular embodiment, the composition according to the invention comprises an amount of water of at least 40% by weight, preferably ranging from 40% to 95% by weight and better still from 50% to 90% by weight, relative to the total weight of the composition. The water used may be sterile demineralized water and/or a floral water such as rose water, cornflower water, camomile water or lime blossom water, and/or a natural spring water or mineral water, for instance: Vittel water, Vichy basin water, Uriage water, Roche Posay water, Bourboule water, Enghien-les-Bains water, Saint Gervais-les-Bains water, Neris-les-Bains water, Allevar-les-Bains water, Digne water, Maizieres water, Neyrac-les-Bains water, Lons-le-Saunier water, Eaux Bonnes water, Rochefort water, Saint Christau water, Fumades water, Tercis-les-bains water and Avene water. The aqueous phase may also comprise reconstituted spring water, i.e. a water containing trace elements such as zinc, copper, magnesium, etc., reconstituting the characteristics of a spring water.
The said aqueous phase may also comprise any water-soluble or water-dispersible additive. Water-soluble additives that may especially be mentioned are polyols comprising from 2 to 8 carbon atoms. The term "polyol" should be understood as meaning any organic molecule comprising at least two free hydroxyl groups. Examples of polyols that may be mentioned include glycerol, glycols, for instance butylene glycol, propylene glycol, isoprene glycol, dipropylene glycol, hexylene glycol, polyethylene glycols and polypropylene glycol. According to a particular embodiment of the invention, the polyol is chosen from glycerol and hexylene glycol. Preferably, the polyol is glycerol.

Water-soluble additives that may also be mentioned include primary alcohols, i.e. an alcohol comprising from 1 to 6 carbon atoms, such as ethanol and isopropanol. It is preferably ethanol. The addition of such an alcohol may especially be suitable when the composition according to the invention is used as a product for the body or the hair.

The amount of water-soluble or water-dispersible additives in the composition of the invention may range, for example, from 0 to 50% by weight, preferably from 0.5% to 30% by weight and even more preferentially from 2% to 20% by weight, relative to the total weight of the composition.

The compositions of the invention can comprise adjuvants normally used in the cosmetics field and in particular those used in cleansing products. Examples of adjuvants that may be mentioned include fragrances, preserving agents, sequestrants (EDTA), pigments, nacres, mineral or organic, matt-effect, whitening or exfoliant fillers, soluble dyes, sunscreens, cosmetic or dermatological active agents such as water-soluble or liposoluble vitamins, antiseptics, antiseborrheic agents, antimicrobials, such as benzoyl peroxide, salicylic acid, triclosan, azelaic acid, and also optical brighteners, nonionic polymers, such as polyvinylpyrrolidone (PVP), anionic polymers, conditioning amphoteric polymers such as Polyquaternium products, for instance Polyquaternium-47 sold under the reference Merquat 2001 by the company Nalco, cationic polymers, fatty substances such as oils or waxes, and silicones. These adjuvants and the concentrations thereof should be such that they do not modify the property desired for the composition of the invention.

Active agents that may be mentioned include any care or cleansing active agent usually used in cosmetics, and in particular antibacterial agents such as octopirox and triclosan, keratolytic agents such as salicylic acid, lactic acid or glycolic acid, salicylic acid derivatives such as 5-n-octanoylsalicylic acid, essential oils, fruit waters (for example from apple or grape) or floral waters (for example rose water), plant extracts (especially from tea, mint, orchid or soybean), mineral salts (for example zinc or copper salts), vitamins such as vitamin C (ascorbic acid), vitamin A
(retinol), vitamin E, vitamin PP (niacinamide) and vitamin B3 (panthenol), and derivatives thereof.

Fillers that may be mentioned include mineral fillers such as talc or magnesium silicate (particle size: 5 microns) sold under the name Luzenac 15 MOO® by the company Luzenac, kaolin or aluminium silicate, for instance the product sold under the name Kaolin Supreme® by the company Imerys, or organic fillers such as starch, for instance the product sold under the name Amidon de Maïs B® by the company Roquette, Nylon microspheres such as those sold under the name Orgasol 2002 UD Nat Cos® by the company Atochem, microspheres based on expanded vinylidene chloride/acrylonitrile/methacrylonitrile copolymer containing isobutane, such as the products sold under the name Expancel 551 DE® by the company Expancel. Fibres, for instance nylon fibres (Polyamide 0.9 Dtex 0.3 mm sold by Etablissements Paul Bonte), or cellulose or "Rayon" fibres (Rayon Flock RCISE NOOO3 MO4® sold by the company Claremont Flock Corporation), may also be added to the composition of the invention.

According to a particular embodiment, the composition according to the invention contains, as fillers, exfoliant particles that will allow scrubbing of the skin. Exfoliant particles that may be used include exfoliant or scrubbing particles of mineral, plant or organic origin. Thus, it is possible to use, for example, polyethylene beads or powder, such as those sold under the name Microthene MN 727 or Microthene MN 710-20 by the company Equistar or such as the powder sold under the name Gotalene 120 Incolore 2 by the company Dupont; Nylon particles, such as those sold by the company Arkema under the name Orgasol 2002 Exd Nat Cos; fibres such as polyamide fibres, such as those sold by the company Uutexbel under the name Pulpe Polyamide 12185 Taille 0.3 mm; polyvinyl chloride powder; pumice stone (INCI name: pumice) such as pumice 3/B from Eyraud; ground shells of fruit kernels, such as ground apricot kernels or walnut shells; sawdust; glass beads; alumina (aluminium oxide) (INCI name: Alumina), such as the product sold under the name Dermagrain 900 by the company Marketech International; sugar crystals; beads which melt during application on the skin, for instance the spheres based on mannitol and cellulose sold under the Unispheres names by the company Induchem, the agar-based capsules sold under the Primasponge names by the company Cognis and the spheres based on jojoba esters sold under the Floraspheres names by the company Floratech; diatomaceous earth frustules such as those sold by the company Alban Muller under the reference Diatami 60/200 microns, and polyethylene wax particles, for instance those which are sold by the company Sasol under the name Cirebelle.

The compositions according to the invention may especially constitute cleansing or makeup-removing products for the skin (body, face, eyes), the scalp and/or the
hair, preferably products for cleansing or removing makeup from the skin (body, face, eyes); or hair cleansing products (shampoos).

Another subject of the invention is a cosmetic treatment process, especially for caring for or cleansing keratin materials such as the skin, including the scalp, keratin fibres such as the eyelashes or the hair, and/or the lips, characterized in that a cosmetic composition as defined above is applied to the said keratin materials. According to a particular embodiment, it is a process for cleansing or removing makeup from the skin; or a hair cleansing process.

The step of applying the composition to the keratin materials may be performed in the presence of water, and/or may be followed by a step of rinsing, for example with water, so as to remove the foam formed and the soiling residues; and/or after an optional leave-on time which may be from 1 to 3 minutes.

The compositions according to the invention may also constitute a composition for treating greasy skin and/or for disinfecting the skin and/or the scalp, especially when they contain an antibacterial agent. In particular, specific active agents for treating greasy skin may be included, for instance salicylic acid, azelaic acid, triclosan, piroctone olamine or niacinamide (vitamin PP). Another subject of the invention is the use of the composition as defined above for the preparation of a composition for treating greasy skin and/or for disinfecting the skin and/or the scalp.

The examples which follow serve to illustrate the invention without, however, exhibiting a limiting nature. The amounts indicated are expressed as weight percentages of starting material (SM) and/or of active material (AM).

**Examples 1 to 5**

<table>
<thead>
<tr>
<th>Composition</th>
<th>1 (invention)</th>
<th>2 (invention)</th>
<th>3 (invention)</th>
<th>4 (invention)</th>
<th>5 (Comparative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium lauryl sulfosuccinate (and) disodium laureth sulfosuccinate (Stepan-Mild LSB from Stepan)</td>
<td>24% SM (sodium lauryl sulfosuccinate 3% AM; disodium laureth sulfosuccinate 3% AM)</td>
<td>32% SM (sodium lauryl sulfosuccinate 4% AM; disodium laureth sulfosuccinate 4% AM)</td>
<td>16% SM (sodium lauryl sulfosuccinate 2% AM; disodium laureth sulfosuccinate 2% AM)</td>
<td>16% SM (sodium lauryl sulfosuccinate 2% AM; disodium laureth sulfosuccinate 2% AM)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Preparation: The water and the surfactants are mixed together without heating. The sodium chloride is then added, and the pH is then adjusted.

The Ford cup viscosity (diameter 4 mm or 6 mm) of each composition is measured 24 hours after manufacture; this method consists in measuring, at a given temperature, the flow time of 90 g of product through an orifice of given diameter. The result is expressed in seconds. The volume of the composition sample is at least 150 ml, the product introduced into the cup being of homogeneous appearance and non-aerated. The sample is thermostatically maintained at 25°C ± 0.5°C before characterization.

These results show that when the composition comprises, as surfactant, sodium lauroyl methyl isethionate alone, the addition of NaCl salt does not afford any viscosity increase, the composition remains fluid, whereas when the composition comprises, as surfactants, sodium lauroyl methyl isethionate and the sodium lauryl sulfoacetate and disodium laureth sulfo succinate mixture, the addition of NaCl salt makes it possible to vary the viscosity of the composition with production of an optimum viscosity.

<table>
<thead>
<tr>
<th>Sodium lauroyl methyl isethionate (Iselux LQ-CLR-PE from Innospec)</th>
<th>7.06% SM (6% AM)</th>
<th>4.71% SM (4% AM)</th>
<th>9.41% SM (8% AM)</th>
<th>9.41% SM (8% AM)</th>
<th>14.1% SM (12% AM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NaCl</td>
<td>from 0 to 10 SM with an optimum viscosity at 2.6</td>
<td>from 0 to 10 SM with an optimum viscosity at 3.2</td>
<td>from 0 to 10 SM with an optimum viscosity at 2.8</td>
<td>from 0 to 10 SM with an optimum viscosity at 2.8</td>
<td>from 0 to 10 SM with no increase in viscosity</td>
</tr>
<tr>
<td>Trisodium ethylenediamine disuccinate</td>
<td>0.5%</td>
<td>0.5%</td>
<td>0.5%</td>
<td>1%</td>
<td>from 0 to 1% SM with no increase in viscosity</td>
</tr>
<tr>
<td>pH agent (NaOH or citric acid)</td>
<td>qs pH</td>
<td>qs pH</td>
<td>qs pH</td>
<td>qs pH</td>
<td>qs pH</td>
</tr>
<tr>
<td>Water</td>
<td>qs 100%</td>
<td>qs 100%</td>
<td>qs 100%</td>
<td>qs 100%</td>
<td>qs 100%</td>
</tr>
<tr>
<td>pH at 25°C</td>
<td>5.8 ± 0.3</td>
<td>5.8 ± 0.3</td>
<td>5.8 ± 0.3</td>
<td>5.8 ± 0.3</td>
<td>5.8 ± 0.3</td>
</tr>
<tr>
<td>Ford cup Viscosity</td>
<td>60 s CF6</td>
<td>200 s CF6</td>
<td>35 s CF6</td>
<td>60 s CF6</td>
<td>Liquid &lt; 15 s CF4</td>
</tr>
</tbody>
</table>

Preparation: The water and the surfactants are mixed together without heating. The sodium chloride is then added, and the pH is then adjusted.
### Examples 6 to 10

The following compositions are prepared.

<table>
<thead>
<tr>
<th>Composition</th>
<th>6 (invention)</th>
<th>7 (invention)</th>
<th>8 (invention)</th>
<th>9 (invention)</th>
<th>10 (Comparative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium lauroyl methyl isethionate</td>
<td>7.06% SM (6% AM)</td>
<td>4.71% SM (4% AM)</td>
<td>9.41% SM (8% AM)</td>
<td>9.41% SM (8% AM)</td>
<td>14.1% SM (12% AM)</td>
</tr>
<tr>
<td>(Iselux LQ-CLR-PE from Innospec)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium lauryl sulfocacetate (and) sodium methyl-2-sulfolaurate (and) disodium 2-sulfolaurate (Stepan-Mild PCL from Stepan)</td>
<td>20% SM (6% AM)</td>
<td>26.66% SM (8% AM)</td>
<td>13.33% SM (4% AM)</td>
<td>13.33% SM (4% AM)</td>
<td>-</td>
</tr>
<tr>
<td>NaCl from 0 to 10 SM with an optimum viscosity at 2.8 from 0 to 10 SM with an optimum viscosity at 2.8 from 0 to 10 SM with an optimum viscosity at 2.8 from 0 to 10 SM with no increase in viscosity</td>
<td>0.5%</td>
<td>0.5%</td>
<td>0.5%</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Trisodium ethylenediamine disuccinate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH agent (NaOH or citric acid) qs pH</td>
<td>qs pH</td>
<td>qs pH</td>
<td>qs pH</td>
<td>qs pH</td>
<td>qs pH</td>
</tr>
<tr>
<td>Water qs 100%</td>
<td>qs 100%</td>
<td>qs 100%</td>
<td>qs 100%</td>
<td>qs 100%</td>
<td>qs 100%</td>
</tr>
<tr>
<td>pH at 25°C 5.8 ± 0.3</td>
<td>5.8 ± 0.3</td>
<td>5.8 ± 0.3</td>
<td>5.8 ± 0.3</td>
<td>5.8 ± 0.3</td>
<td>5.8 ± 0.3</td>
</tr>
<tr>
<td>Ford cup Viscosity 107 s CF4</td>
<td>39 s CF6</td>
<td>107 s CF4</td>
<td>104 s CF4</td>
<td>Liquid &lt; 15 s CF4</td>
<td></td>
</tr>
<tr>
<td>Liquid &lt; 15 s CF4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Preparation process: The water and the surfactants are mixed together without heating. The sodium chloride is then added, and the pH is then adjusted.

The Ford cup viscosity (diameter 4 mm or 6 mm) of each composition is measured 24 hours after manufacture; this method consists in measuring, at a given temperature, the flow time of 90 g of product through an orifice of given diameter. The result is expressed in seconds.

The volume of the composition sample is at least 150 ml, the product introduced into the cup being of homogeneous appearance and non-aerated.

The sample is thermostatically maintained at 25°C ± 0.5°C before characterization.

These results show that when the composition comprises, as surfactant, sodium lauroyl methyl isethionate alone, the addition of NaCl salt does not afford any viscosity increase, the composition remains fluid, whereas when the composition comprises, as surfactants, sodium lauroyl methyl isethionate and the sodium lauryl sulfoacetate, sodium methyl-2 sulfolaurate and disodium 2-sulfolaurate mixture, the addition of NaCl salt makes it possible to vary the viscosity of the composition with production of an optimum viscosity.
1. Foaming composition, preferably in the form of an aqueous gel, comprising:
   - at least one anionic surfactant chosen from (C8-C30)acyl (C1-C4)alkyl isethionates, present in a content ranging from 0.1% to 20% by weight, relative to the total weight of the composition, and
   - at least one anionic surfactant chosen from C8-C30 alkyl sulfoacetates.

2. Composition according to Claim 1, in which the anionic surfactant chosen from (C8-C30)acyl (C1-C4)alkyl isethionates is chosen from the compounds of formula (I):

   \[ R^1\text{O-C-O-C-SO}_3^\text{M+} \]

   in which:
   - R1 is a linear or branched, saturated or unsaturated hydrocarbon-based chain, comprising from 7 to 29 carbon atoms, preferably from 9 to 17 carbon atoms, preferentially from 9 to 15 carbon atoms and better still from 9 to 13 carbon atoms; preferentially, R1-CO- is a lauroyl group;
   - R2, R3, R4 and R5 represent, independently of each other, a hydrogen atom or a linear or branched alkyl group comprising from 1 to 4 carbon atoms, especially a methyl, ethyl, propyl or butyl group, in particular a methyl group; at least one of the radicals R2, R3, R4 or R5 representing an alkyl group comprising from 1 to 4 carbon atoms; and
   - M+ denotes a hydrogen atom, an alkali metal such as Na, Li or K, preferably Na or K, an alkaline-earth metal such as Mg, or an ammonium group.

3. Composition according to Claim 2, in which at least one of the radicals R4 or R5 represents a linear or branched alkyl group comprising from 1 to 4 carbon atoms; better still, at least one of the radicals R4 or R5 represents a linear alkyl group comprising from 1 to 4 carbon atoms; even better still, at least one of the radicals R4 or R5 represents a methyl radical.

4. Composition according to either of Claims 2 and 3, in which R2, R3 and R5 represent a hydrogen atom and R4 represents a linear or branched, preferably linear, alkyl group, comprising from 1 to 4 carbon atoms; preferably chosen from methyl, ethyl, propyl and butyl; even better still, R4 represents a methyl group.
5. Composition according to one of the preceding claims, in which the (C8-C30)acyl (C1-C4)alkyl isethionate is chosen from lauroyl methyl isethionates, and especially sodium lauroyl methyl isethionates.

6. Composition according to any one of the preceding claims, in which the cosmetic composition comprises the (C8-C30)acyl (C1-C4)alkyl isethionate(s) in a content from 0.1% to 20% by weight, preferably from 0.5% to 17% by weight, better still from 1% to 15% by weight and even better still from 1.5% to 10% by weight, relative to the total weight of the said composition.

7. Composition according to any one of the preceding claims, in which the C8-C30 alkyl sulfoacetates correspond to formula (II) below:

\[ M'SO_3-CH_2-CO-O-(CH_2)_x-CH_3 \]

in which:
- \( x \) denotes an integer ranging from 7 to 29, preferably from 9 to 17, preferentially from 9 to 15 and better still from 9 to 13; and
- \( M' \) denotes a hydrogen atom, an alkali metal, an alkaline-earth metal, an ammonium group or a cation derived from an amine.

8. Composition according to any one of the preceding claims, in which the cosmetic composition comprises the C8-C30 alkyl sulfoacetate(s) in a content from 0.1% to 30% by weight, preferably from 0.2% to 25% by weight, even better still from 0.5% to 20% by weight, or even from 1% to 15% by weight, preferentially from 1.5% to 15% by weight and even better still from 2% to 10% by weight, relative to the total weight of the composition.

9. Composition according to any one of the preceding claims, also comprising one or more additional anionic surfactants chosen from optionally oxyalkylenated sulfoacetates, and then preferably comprise from 1 to 50 ethylene oxide units and better still from 1 to 10 ethylene oxide units.

10. Composition according to Claim 9, in which the sulfoacetate anionic surfactants are chosen from optionally oxyalkylenated (C8-C30)alkyl sulfoacetates and optionally oxyalkylenated (C8-C30)alkylamide sulfoacetates; and in particular from the sulfoacetates of formula (III) below:

\[ CH_3(CH_2)_n(OCH_2CH_2)_m-O-CO-CH(SO_3M)CH_2COOM' \]

in which:
- \( n \) denotes an integer ranging from 7 to 29, preferably from 9 to 17, preferentially from 9 to 15 and preferably from 9 to 13;
- \( m \) denotes an integer ranging from 0 to 50;
- \( M \) and \( M' \) denote, independently of each other, a hydrogen atom, an alkali metal, an alkaline-earth metal, an ammonium group or a cation derived from an amine.
11. Composition according to either of Claims 9 and 10, in which the sulfosuccinate anionic surfactants are optionally oxyalkylated alkyl sulfosuccinates in which the alkyl radical comprises from 8 to 30 carbon atoms, preferably from 10 to 18 carbon atoms, even more preferably from 10 to 16 carbon atoms and preferably from 10 to 14 carbon atoms; and preferentially are a lauryl or laureth sulfosuccinate, more preferentially an alkali metal salt of lauryl or laureth sulfosuccinate, and even more preferentially disodium lauryl sulfosuccinate or disodium laureth sulfosuccinate.

12. Composition according to any one of Claims 9 to 11, comprising the sulfosuccinate(s) in a content ranging from 0.4% to 30% by weight, preferably from 0.5% to 25% by weight, better still from 0.6% to 25% by weight, even better still from 1% to 20% by weight, preferentially from 1.5% to 15% by weight and even better still from 2% to 10% by weight, relative to the total weight of the composition.

13. Composition according to any one of the preceding claims, also comprising one or more additional anionic surfactants chosen from fatty acid sulfonates and fatty acid ester sulfonates, especially those surfactants comprising an alkyl radical containing 8 to 30 carbon atoms, preferably 10 to 18 carbon atoms, even more preferentially from 10 to 16 carbon atoms and better still from 10 to 14 carbon atoms, and most particularly those corresponding to formula (IV) below:

\[
\text{CH}_3(\text{CH}_2)_x\text{CH}(\text{SO}_3\text{M})\text{COOY}
\]

in which:
- \(x\) denotes an integer ranging from 7 to 29, preferably from 9 to 17, even more preferentially from 9 to 15 and better still from 9 to 13;
- \(\text{M}\) denotes a hydrogen atom, an alkali metal, an alkaline-earth metal, an ammonium group or a cation derived from an amine, and
- \(Y\) represents a hydrogen atom, a \(\text{C}-\text{C}_4\) alkyl radical such as a methyl or ethyl radical, or an alkali metal or alkaline-earth metal.

14. Composition according to Claim 13, comprising the said fatty acid sulfonates and/or fatty acid ester sulfonates in a content from 0.5% to 30% by weight, preferably from 1% to 25% by weight, preferentially from 1.5% to 20% by weight and even better still from 2% to 15% by weight, relative to the total weight of the composition.

15. Composition according to any one of the preceding claims, in which the total amount of surfactants present in the composition is between 1% and 40% by weight, preferably between 3% and 35% by weight, even more preferentially between 5% and 30% by weight and better still between 7% and 20% by weight, or even between 7% and 15% by weight, relative to the total weight of the composition.
16. Composition according to any one of the preceding claims, comprising an amount of water of at least 40% by weight, preferably ranging from 40% to 95% by weight and better still from 50% to 90% by weight, relative to the total weight of the composition.

17. Cosmetic treatment process, especially for caring for or cleansing keratin materials such as the skin, including the scalp, keratin fibres such as the eyelashes, the hair, and/or the lips, characterized in that a cosmetic composition as defined in one of Claims 1 to 16 is applied to the said keratin materials; the said application step possibly being followed by a step of rinsing, for example with water; and/or after an optional leave-on time.
# INTERNATIONAL SEARCH REPORT

**A. CLASSIFICATION OF SUBJECT MATTER**

INV. A61Q5/02  A61Q19/10  A61K8/04  A61K8/46

**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)

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)

EPO-Internal , WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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<td>DATABASE GNPD [Onl i ne] MINTEL; June 2013 (2013-06) , &quot;Body wash&quot; , XP002729352 , Database accessi on no. 2097122</td>
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[X] Further documents are listed in the continuation of Box C.  
[X] 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  
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**P** document published prior to the international filing date but later than the priority date claimed  

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"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  
"A" document member of the same patent family

Date of the actual completion of the international search  
29 January 2015

Date of mailing of the international search report  
10/02/2015

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European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040;  
Fax: (+31-70) 340-3016

Authorized officer  
Di eb ol d, A l a i n
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<td>FR 2 984 164 Al (OREAL [FR]) 21 June 2013 (2013-06-21) example 4</td>
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