Abstract:

Title: COSMETIC COMPOSITIONS IN THE FORM OF WATER-IN-OIL EMULSIONS INCLUDING A JASMONIC ACID DERIVATIVE AND A SILICONE SURFACTANT

This invention relates to a composition, in the form of a water-in-oil emulsion, in which said composition includes a physiologically acceptable medium containing at least one jasmonic acid derivative compound and at least one silicone surfactant.
COSMETIC COMPOSITIONS IN THE FORM OF WATER-IN-OIL EMULSIONS
INCLUDING A JASMONIC ACID DERIVATIVE AND A SILICONE SURfactant

This invention relates to skincare and/or makeup compositions. More
speciﬁcally, the invention relates to cosmetic compositions in the form of water-in-oil
emulsions, including a jasmonic acid derivative and a speciﬁc silicone surfactant.

Consumers look for cosmetic skincare or makeup products that can be easily
and quickly spread on the skin in the form of a deposit that should not be thick, but
that should instead blend as much as possible with the support, and they also look
for anti-aging products.

Consumers are therefore increasingly looking for cosmetic products that
combine foundation makeup properties and skincare properties, in particular for
fighting the effects of aging.

These products usually contain active ingredients recognized for their anti-
aging activity and colored particles such as pigments or nacres enabling the signs of
aging to be hidden.

Among anti-aging active ingredients, it is possible to cite alpha-hydroxy acids
such as lactic acid and citric acid, beta-hydroxy acids such as salicylic acid, and also
jasmonic acid derivatives in particular described in the application EP 1 333 021.

These jasmonic acid derivatives have the advantage of being well tolerated
and of not causing skin discomfort such as tingling, tightness or redness.

However, the addition of these compounds to cosmetic formulations, in
particular in the form of emulsions, may signiﬁcantly alter their stability and cause a
phase change or a reduction in viscosity over time.

There is therefore a need to provide compositions in the form of W/O
emulsions that are stable and that have good cosmetic application properties.

This invention is intended to provide water-in-oil emulsions intended for use in
skincare and/or makeup compositions.

This invention is intended to provide skincare and/or makeup compositions in
the form of water-in-oil emulsions that are stable over time.

This invention is intended to provide skincare and/or makeup compositions
having a good compromise between stability and cosmetic properties.

Thus, the invention relates to a composition, in the form of a water-in-oil
emulsion including an aqueous phase dispersed in a fat phase, in which said
composition includes a physiologically acceptable medium containing:
- at least one jasmonic acid derivative compound with the following formula (I):

\[
\begin{align*}
\text{OH} & \\
R_2 & \\
R_1 & 
\end{align*}
\]

(I)

in which:
- \( R_1 \) represents a radical \( \text{COOR}_3 \), with \( R_3 \) designating a hydrogen atom or a C1-C4 alkyl radical, optionally substituted by one or more hydroxyl groups;
- \( R_2 \) represents a hydrocarbon radical, saturated or unsaturated, and linear including 1 to 18 carbon atoms, or branched or cyclic including 3 to 18 carbon atoms;
- as well as their optical isomers and corresponding salts; and
- at least one silicone surfactant with the following formula (II):

\[
R^a R^b R^3 \text{SiO}(4-a-b-c)/2
\]

(II)

in which:
- \( a \) is between 1.0 and 2.5;
- \( b \) is between 0.001 and 1.5;
- \( c \) is between 0.001 and 1.5;
- \( R^1 \) is an alkyl radical including 1 to 30 carbon atoms
- \( R^2 \) is a hydrophilic group with the formula \(-\text{C}_m\text{H}_{2m-0}-X\) (III) in which:
  - \( m \) is equal to 0 or less than or equal to 20;
  - \( X \) is:
  - a radical of formula \(-[\text{C}_2\text{H}_4\text{O}]_d[\text{C}_3\text{H}_6\text{O}]_e\text{R}^4\) (IV) in which:
    - \( d \) is between 2 and 200;
    - \( e \) is equal to 0 or less than or equal to 200;
    - \( R^4 \) is a hydrogen atom or an alkyl radical including 1 to 30 carbon atoms,
  - or a radical of formula \(-[\text{CH}_2\text{CH(OH)}\text{CH}_2\text{O}]_f\text{R}^5\) (V) in which:
    - \( f \) is between 1 and 20;
    - \( R^5 \) is a hydrogen atom or an alkyl radical including 1 to 30 carbon atoms,
- \( R^3 \) is a silicone group of formula \(-\text{C}_8\text{H}_{2y}-(\text{SiR}_2\text{O})_n\text{Si}(\text{R})_3\) (VI)

- a radical of formula \(-[\text{C}_2\text{H}_4\text{O}]_d[\text{C}_3\text{H}_6\text{O}]_e\text{R}^4\) (IV) in which:
  - \( d \) is between 2 and 200;
  - \( e \) is equal to 0 or less than or equal to 200;
  - \( R^4 \) is a hydrogen atom or an alkyl radical including 1 to 30 carbon atoms,
- or a radical of formula \(-[\text{CH}_2\text{CH(OH)}\text{CH}_2\text{O}]_f\text{R}^5\) (V) in which:
  - \( f \) is between 1 and 20;
  - \( R^5 \) is a hydrogen atom or an alkyl radical including 1 to 30 carbon atoms,
in which:
. \( g \) is between 1 and 5, and is preferably equal to 2;
. \( h \) is between 1 and 500, and preferably between 1 and 50;
. \( R \) is an alkyl radical including 1 to 30 carbon atoms;

the molecular weight of said surfactant is between 500 g.mol\(^{-1}\) to 200,000 g.mol\(^{-1}\).

The compositions according to the invention are cosmetic compositions intended for skincare and/or makeup.

The emulsions obtained have good stability over time, a pleasant appearance and, during application, comfortable sensation properties.

The term "stable emulsion" refers to an emulsion that, after 1 month of storage at room temperature (20-22 °C), at 4 °C and 37°C, does not show any macroscopic change.

**Jasmonic acid derivatives**

The compositions of the invention include at least one jasmonic acid derivative of formula (I) as defined above.

The compositions of the invention may include mixtures of compounds of formula (I).

According to this invention, the "alkyl" radicals Cx-Cy represent saturated hydrocarbon radicals, in a straight or branched chain, including from x to y carbon atoms, preferably 1 to 12, or 1 to 4 carbon atoms (they may typically be represented by the formula \( \text{C}_n\text{H}_{2n+1} \), with \( n \) representing the number of carbon atoms). It is possible in particular to cite, when they are linear, methyl, ethyl, propyl, butyl, pentyl, hexyl, octyl, nonyl and decyl radicals. It is possible in particular to cite, when they are branched or substituted by one or more alkyl radicals, isopropyl, tert-butyl, 2-ethylhexyl, 2-methylbutyl, 2-methylpentyl, 1-methylpentyl and 3-methylheptyl radicals.

According to an embodiment, in formula (I), \( R_3 \) is chosen from the group consisting of H, methyl, ethyl, optionally substituted by a hydroxyl and propyl group, optionally substituted by one or two hydroxyl group(s).

When \( R_3 \) represents an alkyl group, it may be substituted by one or more hydroxyl group(s), the or said hydroxyl group(s) capable of being bound in the terminal position of the alkyl radical and/or in the lateral position. For example \( R_3 \) may be a -CH\(_2\)-CH(OH)-CH\(_3\) group or a -CH\(_2\)-CH\(_2\)-CH\(_2\)OH group or a -CH\(_2\)-CH(OH)-CH\(_2\)OH group.
According to an embodiment, the compositions of the invention include a compound of formula (I), in which R is chosen from the group consisting of: -COOH, -COOCH₃, -COO-CH₂CH₃, -COO-CH₂CH(OH)-CH₂OH, -COOCH₂CH₂CH₂OH and -COOCH₂CH(OH)-CH₃.

According to an embodiment, the compositions of the invention may include a compound of formula (I), in which R₂ is a hydrocarbon radical, linear, saturated or unsaturated, having 2 to 7 carbon atoms.

In formula (I), R₂ may represent an alkyl radical, linear or branched, including 1 to 18 carbon atoms, or preferably 2 to 7 carbon atoms.

According to an embodiment, in formula (I), R₂ is chosen from the group consisting of pentyl, pentenyl, hexyl and heptyl radicals.

According to an embodiment, the compositions of the invention include a compound of formula (I), in which R₁ is -COOH.

A particular jasmonic acid derivative compound used in the compositions of the invention responds to the following formula (1-1):

![Formula](image)

in which R₂ represents an alkyl group, linear or branched, including 1 to 18 carbon atoms, or preferably 2 to 7 carbon atoms.

According to an embodiment, in formula (1-1), R₂ is chosen from the group consisting of pentyl, pentenyl, hexyl and heptyl radicals.

According to a particular embodiment, the compositions of the invention include a compound of formula (I) chosen from among 3-hydroxy-2-pentyl-cyclopentane acetic acid or 3-hydroxy-2-pentyl-cyclopentane acetic acid sodium salt.

The compounds of formula (I) may comprise one or more asymmetric carbon atoms. They may therefore be in the form of enantiomers or diastereoisomers. These enantiomers or diastereoisomers as well as mixtures thereof, including racemic mixtures, are part of the invention.

The compounds of formula (I) may be in the basic state or in the form of acid addition salts. Such addition salts are part of the invention.

The salts of the compounds capable of being used according to the invention are in particular chosen from the metal alkaline salts, such as sodium or potassium; the metal alkaline-earth salts, such as calcium, magnesium or strontium; the metal...
salts, such as zinc, aluminum, manganese and copper; the ammonium salts of
formula $\text{NH}_4^+$; the quaternary ammonium salts; the organic amine salts, such as, for
example, methylamine, dimethylamine, trimethylamine, triethylamine, ethylamine, 2-
hydroxyethylamine, bis-(2-hydroxyethyl)amine and tri-(2-hydroxyethyl)amine salts;
or lysine and arginine salts. Preferably, the salts chosen from sodium, potassium,
magnesium, strontium, copper, manganese and zinc are used. More preferably, 
sodium salt is used.

According to a particular embodiment, in the compositions of the invention, the
compound of formula (I) is brought to the aqueous phase and in a content ranging
from 0.001% to 10%, in particular from 0.1% to 8%, and preferably from 0.5% to 5%
by weight with respect to the total weight of said composition.

**Silicone surfactants**

The compositions of the invention include at least one silicone surfactant of
formula (II) as defined above.

The compositions of the invention may include mixtures of surfactants of
formula (II).

The silicone surfactants of the invention are characterized by a silicone
skeleton that comprises silicone side chains and hydrophilic side chains.

The silicone surfactants of the compositions according to the invention have a
molecular weight of between 500 g.mol$^{-1}$ to 200,000 g.mol$^{-1}$, and preferably
2000 g.mol$^{-1}$ to 100,000 g.mol$^{-1}$.

The silicone surfactants used in the context of this invention are in particular
those described in applications EP 1 072 627 and EP 1 213 316.

The range of values indicated in formula (II) for indices $a$, $b$, $c$, $d$, $e$, $f$, $g$, $h$ and
$m$ include the terminals. Thus, for example, when $a$ is between 1.0 and 2.5, it means
that $a$ is greater than or equal to 1.0 and less than or equal to 2.5.

According to an embodiment, in the compositions of the invention, the silicone
surfactant of formula (II) is present in a content of between 0.1% and 15%,
preferably 0.5% to 10% and even more preferably 1% to 6% by weight with respect
to the total weight of said composition.

In formula (II) as defined above, $a$ is preferably between 1.2 and 2.3.
In formula (II) as defined above, $b$ is preferably between 0.05 and 1.0.
In formula (II) as defined above, $c$ is preferably between 0.05 and 1.0.
In formula (II) as defined above, $R^1$ may be chosen, for example, from the methyl, ethyl, propyl, butyl, pentyl, hexyl, heptyl, octyl, nonyl and decyl groups. Preferably, $R^1$ is a methyl group.

According to an embodiment, at least 50%, preferably at least 70% of the $R^1$ are methyl groups. According to an embodiment, 100% of the $R^1$ groups are methyl groups. According to an embodiment, in formula (V) as defined above, $R^5$ is a hydrogen atom.

According to an embodiment, in formula (VI) as defined above, $h$ is preferably between 3 and 100.

In formula (III) as defined above, $m$ may be between 0 and 20, preferably between 0 and 15, or between 3 and 20.

In formula (IV) as defined above, $d$ is preferably between 5 and 100. In formula (IV) as defined above, $e$ is preferably between 0 and 100. In formula (IV) as defined above, $R^4$ is preferably a hydrogen atom.

According to an embodiment, in formula (IV), the sum $d+e$ is between 3 and 200, and preferably between 5 and 100.

According to a preferred embodiment, the composition of the invention includes at least one silicone surfactant with the following formula (II):

$$R^1 \text{a} R^2 b R^3 c \text{SiO} (4-a-b-c)/2$$

in which:

* $a$ is between 1.2 and 2.3;
* $b$ is between 0.05 and 1.0;
* $c$ is between 0.05 and 1.0;
* $R^1$ is an alkyl radical including 1 to 30 carbon atoms, with at least 50%, preferably at least 70%, of $R^1$ groups representing a methyl group;
* $R^2$ is a hydrophilic group of formula $\text{-C}_m \text{H}_{2m-1} \text{O-X}$ (III)

in which:

* $m$ is equal to 0 or less than or equal to 20;
* $X$ is:

  - or a radical of formula $\text{-[C}_2 \text{H}_4 \text{O]}_d \text{[C}_3 \text{H}_6 \text{O]}_e R^4$ (IV)

in which:

* $d$ is between 5 and 100;
* $e$ is between 0 and 100;
* $R^4$ is a hydrogen atom;

  - or a radical of formula $\text{-[CH}_2 \text{CH(OH)CH}_2 \text{O]}_f R^5$ (V)

in which:
f is between 1 and 20;
. R^5 is a hydrogen atom;

* R^3 is a silicone group of formula \(-C_{g}H_{2g}-(SiR_{2}0)h-Si(R)3\) (VI) in which:

. \(g\) is between 1 and 5, and is preferably equal to 2;
. \(h\) is between 3 and 100;
. \(R\) is an alkyl radical including 1 to 30 carbon atoms;

the molecular weight of said silicone surfactant is between 500 g.mol\(^{-1}\) and 200,000 g.mol\(^{-1}\).

As examples of silicone surfactants of formula (II), it is possible to cite, as examples, PEG-9 polydimethylsiloxeyethyl dimethiconc sold under reference KF 6028, lauryl PEG-9 polydimethylsiloxeyethyl dimethiconc sold under reference KF 6038, polyglyceryl-3 polydimethylsiloxeyethyl dimethiconc sold under reference KF 6104 and lauryl polyglyceryl-3 polydimethylsiloxeyethyl dimethiconc sold under reference KF 6105 by the Shin Etsu company.

According to an embodiment, lauryl PEG-9 polydimethylsiloxeyethyl dimethicone, sold in particular under reference KF 6038 by the Shin Etsu company, is used as a silicone surfactant.

**Coloring agents**

A composition according to the invention may also include at least one coloring agent, in particular a powder coloring agent.

The coloring agent present in the compositions of the invention, is chosen, for example, from the group consisting of pigments, dyes and interferential particles.

According to an embodiment, the coloring agent is chosen from the pigments.

The coloring agents may be present in an amount of 0.001% to 40% by weight with respect to the total weight of the cosmetic composition.

A cosmetic composition according to the invention may advantageously incorporate at least one coloring agent chosen from organic or inorganic coloring materials, in particular of the pigment or nacre type conventionally used in cosmetic compositions, fat-soluble or water-soluble dyes, materials with a specific optical effect and mixtures thereof.

The term pigment refers to inorganic or organic white or colored particles, insoluble in an aqueous solution, intended to color and/or opacify the resulting film.
The pigments may be present in an amount of 0.1% to 40% by weight, in particular 1% to 30% by weight, and in particular 5% to 15% by weight with respect to the total weight of the cosmetic composition.

As inorganic pigments that can be used in the invention, it is possible to cite titanium, zirconium or cerium oxides, as well as zinc, iron or chromium oxides, Prussian blue, manganese violet, ultramarine blue and chromium hydrate. Preferably, the composition of the invention includes at least titanium oxides and iron oxides.

It may also be a pigment having a structure that can be, for example, of the sericite / brown iron oxide / titanium dioxide / silica type. Such a pigment is sold, for example, under the reference name COVERLEAF NS or JS by the CHEMICALS AND CATALYSTS company and has a contrast ratio of around 30.

The coloring material may also comprise a pigment having a structure that can be, for example, of the silica microsphere type containing iron oxide. An example of a pigment having this structure is that sold by the MIYOSHI company under the reference name PC BALL PC-LL-100 P, with this pigment being comprised of silica microspheres containing yellow iron oxide.

The term "nacre" refers to colored particles of any shape, iridescent or not, in particular, produced by certain mollusks in their shell or produced synthetically, and which have an optical interference color effect.

The nacres may be present in an amount of 0.1% to 30% by weight, in particular, from 0.5% to 20% by weight and, in particular, from 1% to 15% by weight with respect to the total weight of the cosmetic composition.

The nacres may be chosen from pearlescent pigments, such as bismuth oxychloride, titanium mica coated with an iron oxide, titanium mica covered with bismuth oxychloride, titanium mica covered with chromium oxide, titanium mica covered with an organic dye, as well as pearlescent pigments based on bismuth oxychloride. They may also be mica particles with a surface on which at least two successive layers of metal oxides and/or organic coloring materials are superimposed.

It is also possible to cite, as examples of nacres, natural mica covered with titanium oxide, iron oxide, natural pigment or bismuth oxychloride.

Among the nacres available on the market, it is possible to cite TIMICA, FLAMENCO and DUOCHROME nacres (mica-based) sold by the ENGALHARD company, the TIMIRON nacres sold by the MERCK company, the PRESTIGE mica-
based nacres sold by the ECKART company and the synthetic SUNCHINE mica-based nacres sold by the SUN CHEMICAL company.

The nacres may more specifically have a yellow, pink, red, bronze, orange, brown and/or copper reflection or color.

As examples of nacres capable of being implemented in the context of this invention, it is possible to cite colored nacres, in particular, sold by the ENGELHARD company, under the name Brilliant Gold 212G (Timica), Gold 222C (Cloisonne), Sparkle Gold (Timica), Gold 4504 (Chromalite) and Monarch Gold 233X (Cloisonne); the bronze nacres sold in particular by the Merck company under the name Bronze fine (17384) (Colorona) and Bronze (17353) (Colorona) and by the Engelhard company under the name Super Bronze (Cloisonne); the orange nacres sold in particular by the Engelhard company under the name Orange 363C (Cloisonne) and Orange MCR 101 (Cosmica) and by the Merck company under the names Passion Orange (Colorona) and Matte Orange (17449) (Microna); the brown nacres sold in particular by the Engelhard company under the name Nu-Antique Copper 340XB (Cloisonne) and Brown CL4509 (Chromalite); the copper-tinted nacres sold in particular by the Engelhard company under the name Copper 340A (Timica); the red-tinted nacres sold in particular by the Merck company under the name Sienna Fine (17386) (Colorona); the yellow-tinted nacres sold in particular by the Engelhard company under the name Yellow (4502) (Chromalite); the gold-tinted red nacres sold in particular by the Engelhard company under the name Sunstone G012 (Gemtone); the pink nacres sold in particular by the Engelhard company under the name Tan Opale G005 (Gemtone); the gold-tinted black nacres sold in particular by the Engelhard company under the name Nu-Antique Bronze 240 AB (Timica), the blue nacres sold in particular by the Merck company under the name Matte Blue (17433) (Microna), the silver-tinted white nacres sold in particular by the Merck company under the name Xirona Silver, and the golden-green pink-orange nacres sold in particular by the Merck company under the name Indian Summer (Xirona), and mixtures thereof.

The cosmetic composition according to the invention may also include water-soluble or fat-soluble dyes. The fat-soluble dyes are, for example, Sudan Red, DC Red 17, DC Green 6, β-carotene, soya oil, Sudan Brown, DC Yellow 11, DC Violet 2, DC Orange 5 and Quinoline Yellow. The water-soluble dyes are, for example, beet juice and caramel.
The dyes may be present in an amount of 0.001% to 5% by weight, in particular 0.01% to 3% by weight, and in particular 0.025% to 1% by weight, with respect to the total weight of the cosmetic composition.

The cosmetic composition according to the invention may also contain at least one material with a specific optical effect.

This effect is different from a simple conventional tint effect, i.e. unified and stabilized as produced by the conventional coloring materials such as, for example, monochromatic pigments. In the sense of the invention "stabilized" means lacking an effect of color variability with the angle of view or in response to a temperature change.

For example, this material may be chosen from particles with a metallic sheen, goniochromatic coloring agents, diffracting pigments, thermochromic agents, optical brightening agents, as well as fibers, in particular, interferential fibers. Of course, these different materials may be combined so as to provide a simultaneous appearance of two effects, or even a new effect according to the invention.

The particles with a metallic sheen capable of being used in the invention are in particular chosen from:

- particles of at least one metal and/or at least one metal derivative,
- particles comprising an organic or inorganic substrate, made of a single material or of multiple materials, covered at least partially by at least one layer with a metallic sheen, including at least one metal and/or at least one metal derivative, and
- mixtures of said particles.

Among the metals capable of being present in said particles, it is possible to cite, for example, Ag, Au, Cu, Al, Ni, Sn, Mg, Cr, Mo, Ti, Zr, Pt, Va, Rb, W, Zn, Ge, Te, Se and mixtures or alloys thereof. Ag, Au, Cu, Al, Zn, Ni, Mo, Cr, and mixtures or alloys thereof (for example, bronzes and brasses) are preferred metals.

The term "metal derivatives" refers to compounds derived from metals, in particular oxides, fluorides, chlorides and sulfides.

As an illustration of these particles, it is possible to cite aluminum particles, such as those sold under the names STARBRITE 1200 EAC® by the SIBERLINE company and METALURE® by the ECKART company.

It is also possible to cite copper metal powders or alloy mixtures, such as those of reference 2844 sold by the RADIUM BRONZE company, metal pigments, for example, aluminum or bronze, such as those sold under the name ROTOSAFE 700 of the ECKART company, silica-coated aluminum particles sold under the name VISIONAIRE BRIGHT SILVER of the ECKART company and metal alloy particles,
such as silica-coated bronze powders (copper and zinc alloy) sold under the name VISIONAIRE BRIGHT NATURAL GOLD of the ECKART company.

They may also be particles comprising a glass substrate such as those sold by the NIPPON SHEET GLASS company under the names MICROGLASS METASHINE.

The goniochromatic coloring agent may be chosen, for example, among the interferential multilayer structures and the liquid crystal coloring agents.

Examples of symmetrical interferential multilayer structures that can be used in compositions produced according to the invention are, for example, the following structures: Al/SiO₂/Al/SiO₂/Al, pigments having this structure and sold by the DUPONT DE NEMOURS company; Cr/MgF₂/Al/MgF₂/Cr, pigments having this structure and sold under the name CHROMAFLAIR by the FLEX company; MoS₂/SiO₂/Al/SiO₂/MoS₂; Fe₂O₃/SiO₂/Al/SiO₂/Fe₂O₃, and Fe₂O₃/SiO₂/Fe₂O₃/SiO₂/Fe₂O₃, pigments having these structures and sold under the name SICOPEARL by the BASF company; MoS₂/SiO₂/mica-oxide/SiO₂/MoS₂; Fe₂O₃/SiO₂/mica-oxide/SiO₂/Fe₂O₃; TiO₂/SiO₂/TiO₂ and TiO₂/Al₂O₃/TiO₂; SnO/TiO₂/SiO₂/TiO₂/SnO; Fe₂O₃/SiO₂/Fe₂O₃; SnO/mica/TiO₂/SiO₂/TiO₂/mica/SnO, pigments having these structures and sold under the name XIRONA by the MERCK company (Darmstadt). For example, these pigments may be pigments with a silica / titanium oxide / tin oxide structure sold under the name XIRONA MAGIC by the MERCK company, pigments with a silica / brown iron oxide structure sold under the name XIRONA INDIAN SUMMER by the MERCK company and pigments with a silica /titanium oxide / mica / tin oxide structure sold under the name XIRONA CARRIBEAN BLUE by the MERCK company. It is also possible to cite the INFINITE COLORS pigments of the SHISEIDO company. According to the thickness and the nature of the different layers, different effects are obtained. Thus, with the structure Fe₂O₃/SiO₂/Al/ SiO₂/Fe₂O₃, the color changes from golden-green to gray-red for SiO₂ layers from 320 to 350nm; from red to golden for SiO₂ layers from 380 to 400nm; from violet to green for SiO₂ layers from 410 to 420nm; from copper to red for SiO₂ layers from 430 to 440nm.

It is possible to cite, as an example of pigments with a multilayer polymeric structure, those sold by the 3M company under the name COLOR GLITTER.

As liquid crystal goniochromatic particles, it is possible to use, for example, those sold by the CHENIX company, as well as that sold by the company HELICONE® HC by the WACKER company.
These goniochromatic coloring agents may be present in the composition in a content ranging from 0.01% to 30% by weight, in particular from 0.1% to 20% by weight with respect to the total weight of said composition.

**Physiologically acceptable medium**

In addition to the compounds mentioned above, a composition according to the invention includes a physiologically acceptable medium.

The term "physiologically acceptable medium" refers to a medium particularly suitable for the application of a composition of the invention on the skin or on the lips.

The physiologically acceptable medium is generally adapted to the type of support on which the composition must be applied, as well as the form in which the composition is to be packaged.

The compositions of the invention are in the form of a W/O emulsion containing a dispersed aqueous phase and a continuous oily phase.

**Aqueous phase**

The composition according to the invention comprises an amount of aqueous phase, which can range, for example, from 10% to 90% by weight, preferably from 20% to 70% by weight and more preferably from 30% to 60% by weight with respect to the total weight of the composition.

The aqueous phase includes water and any other water-soluble compound that might be present, such as, in particular, water-soluble additives and solvents.

As water-soluble solvents, it is possible to cite, in particular, alcohols comprising 2 to 8 carbon atoms, in particular from 2 to 6 carbon atoms such as ethanol.

As polyols, it is possible to cite, for example, glycerol, butylene glycol and polyethylene glycols.

The aqueous phase may also contain other additives such as water-soluble active ingredients, preservatives, salts, gelling agents, fillers, water-soluble or water-dispersible polymers, water-soluble dyes, and so on.

**Fatty phase**

A cosmetic composition according to this invention may include at least one liquid and/or solid fatty phase.

In particular, a composition of the invention may include at least one liquid
fatty phase, in particular at least one oil as mentioned below.

The term oil refers to any fatty body in liquid form at room temperature (20-25°C) and atmospheric pressure. These oils may be of animal, plant, mineral or synthetic origin.

According to an embodiment, the fatty phase of the compositions of the invention includes at least one volatile oil and/or at least one non-volatile oil.

**Volatile oils**

According to an embodiment, the fatty phase of the compositions of the invention includes at least one volatile oil. The fatty phase of the compositions of the invention may include a mixture of multiple volatile oils.

The term "volatile oil" refers to any non-aqueous medium capable of evaporating from the skin or lips, in less than one hour, at room temperature and atmospheric pressure. The volatile oil is a volatile cosmetic oil, liquid at room temperature. More specifically, a volatile oil has an evaporation rate of between 0.01 and 200 mg/cm²/min, inclusive.

To measure this evaporation rate, 15g of oil or a mixture of oils to be tested are introduced into a crystallizer, 7cm in diameter, placed on a scale located in a large 0.3m³ chamber temperature-controlled at a temperature of 25°C, and humidity-controlled with a relative humidity of 50%. The liquid is left to evaporate freely, without stirring, by providing ventilation with a fan (PAPST-MOTOREN, reference 8550 N, rotating at 2700 rpm) positioned vertically above the crystallizer containing the solvent, with the blades directed toward the crystallizer and at a distance of 20cm from the base of the crystallizer. The mass of oil remaining in the crystallizer is measured at regular intervals. The evaporation rates are expressed in mg of oil evaporated per surface area unit (cm²) and per time unit (minute).

The volatile oils may be hydrocarbon-based, silicone-based or fluorine-based.

According to the invention, the term "silicone oil" refers to an oil including at least one silicon atom, and in particular at least on Si-0 group.

The term "fluorine oil" refers to an oil including at least one fluorine atom.

The term "hydrocarbon oil" refers to an oil containing primarily hydrogen and carbon atoms.

The oils may optionally include oxygen, nitrogen, sulfur and/or phosphorus atoms, for example, in the form of hydroxyl or acid radicals.

The volatile oils may be chosen from hydrocarbon oils having 8 to 16 carbon atoms, and in particular branched C₉-C₁₆ alkanes (also called isoparaffins or
isoalkanes), such as isododecane (also called 2,2,4,4,6-pentamethylheptane),
isodecane, isohexadecane, and, for example, the oils sold under the trade names
ISOPARS® or PERMETHYLS®.

It is also possible to cite, as a hydrocarbon volatile oil, linear C₉-C₁₇ alkanes,
such as dodecane (C₁₂) and tetradecane (C₁₄), sold respectively under the names
PARAFOL® 12-97 and PARAFOL® 14-97 (Sasol), and, as alkanes obtained
according to the method described in the international application WO 2007/068371
A1, such as the undecane (Cn) and tridecane (C₁₃) mixture sold under the name
CETIOL® UT (Cognis).

Among the volatile hydrocarbon oils, isododecane and the undecane (Cn) and
tridecane (C₁₃) mixture are preferred.

It is also possible to use, as volatile oils, volatile silicones, such as, for
example, volatile linear or cyclic silicones, in particular those having a viscosity
below or equal to 8 centistokes (cSt) (8 x 10⁻³ m²/s), and having, in particular, from 2
to 10 silicon atoms, and in particular from 2 to 7 silicon atoms, in which these
silicones optionally comprise alkyl or alkoxy groups having from 1 to 10 carbon
atoms. It is possible to cite, as a volatile silicone oil that can be used in the
invention, in particular, dimethicones with a viscosity of 5 and 6 cSt, octamethyl
cyclotetrasiloxane, decamethyl cyclopentasiloxane, dodecamethyl
cyclohexasiloxane, heptamethyl hexyltrisiloxane, heptamethyloctyl trisiloxane,
hexamethyl disiloxane, octamethyl trisiloxane, decamethyl tetrasiloxane,
dodecamethyl pentasiloxane, and mixtures thereof.

More specifically, as a volatile silicone oil, it is possible to cite linear or cyclic
silicone oils having from 2 to 7 silicon atoms, in which these silicones optionally
comprise alkyl or alkoxy groups having from 1 to 10 carbon atoms.

As preferred examples, it is possible to cite decamethyl cyclopentasiloxane,
dodecamethyl cyclohexasiloxane and dodecamethyl pentasiloxane.

Among the volatile silicone oils, dodecamethyl pentasiloxane is preferred.

It is possible to cite, as a volatile fluorine oil, for example,
nonafluoromethoxybutane or perfluoromethylcyclopentane, and mixtures thereof.

**Non-volatile oils**

According to an embodiment, the fatty phase of the compositions of the
invention includes at least one non-volatile oil. The fatty phase of the compositions
of the invention may include a mixture of a plurality of non-volatile oils.
The term "non-volatile oil" is intended to mean an oil remaining on the skin or keratin fiber at ambient temperature and atmospheric pressure. More specifically, a non-volatile oil has an evaporation rate strictly below 0.01 mg/cm²/min.

The non-volatile oils may, in particular, be chosen from among the non-volatile hydrocarbon, fluorine and/or silicone oils.

It is possible to cite, as a non-volatile hydrocarbon oil:
- hydrocarbon oils of animal origin, such as perhydrosqualene,
- hydrocarbon oils of plant origin, such as phytostearyl esters, for instance phytostearyl oleate, phytostearyl isostearate and lauroyl/octyldodecyl/phytostearyl glutamate (AJINOMOTO, ELDEW PS203), triglycerides constituted of fatty acid esters of glycerol, in particular in which the fatty acids may have chain lengths ranging from C₄ to C₃₆, and in particular from C₁₈ to C₃₆, it being possible for these oils to be linear or branched, and saturated or unsaturated; these oils may in particular be heptanoic or octanoic triglycerides, shea oil, alfalfa oil, poppy seed oil, pumpkin oil, millet oil, barley oil, quinoa oil, rye oil, candlenut oil, passionflower oil, shea butter, aloe oil, sweet almond oil, peach kernel oil, groundnut oil, argan oil, avocado oil, baobab oil, borage oil, broccoli oil, calendula oil, camelina oil, canola oil, carrot oil, safflower oil, hemp oil, rapeseed oil, cotton seed oil, coconut oil, marrow seed oil, wheat germ oil, jojoba oil, lily oil, macadamia oil, corn oil, meadowfoam oil, St. John's Wort oil, monoi oil, hazelnut oil, apricot kernel oil, nut oil, olive oil, evening primrose oil, palm oil, blackcurrant seed oil, kiwi seed oil, grape seed oil, pistachio oil, pumpkin oil, winter squash oil, quinoa oil, musk rose oil, sesame oil, soya oil, sunflower oil, castor oil and watermelon oil, and mixtures thereof, or alternatively caprylic/capric acid triglycerides, for instance those sold by the STEARINERIES DUBOIS company or those sold under the names MIGLYOL 810®, 812® and 818® by the DYNAMIT NOBEL company,
- linear or branched hydrocarbons of mineral or synthetic origin, such as liquid paraffins and derivatives thereof, petroleum jelly, polydecenes, polybutenes, hydrogenated polyisobutene such as Parleam, squalane;
- synthetic ethers having from 10 to 40 carbon atoms;
- synthetic esters, for instance oils of formula RI.COOR₂, in which R₁ represents a linear or branched fatty acid residue containing from 1 to 40 carbon atoms, and R₂ represents a hydrocarbon-based chain, in particular a branched chain, containing from 1 to 40 carbon atoms provided that R₁ and R₂ is greater than or equal to 10. The esters may in particular be selected from fatty acid and alcohol esters, for instance: cetostearyl octanoate, isopropyl alcohol esters, such as
isopropyl myristate, isopropyl palmitate, ethyl palmitate, 2-ethylhexyl palmitate, isopropyl stearate or isostearate, isostearyl isostearate, octyl stearate, hydroxylated esters, for instance isostearyl lactate, octyl hydroxystearate, diisopropyl adipate, heptanoates, and especially isostearyl heptanoate, alcohol or polyalcohol octanoates, decanoates or ricinoleates, for instance propylene glycol dioctanoate, cetyl octanoate, tridecyl octanoate, 2-ethylhexyl 4-diheptanoate and palmitate, alkyl benzoate, polyethylene glycol diheptanoate, propylene glycol 2-diethylhexanoate, and mixtures thereof, C_{12}-C_{15} alkyl benzoates, hexyl laurate, neopentanoic acid esters, for instance isodecyl neopentanoate, isotrictadecyl neopentanoate, isostearyl neopentanoate, or octyldecyl neopentanoate, 1sononanoic acid esters, for instance isononyl isoonanoate, isotrictadecyl isoonanoate and octyl isoonanoate, hydroxylated esters such as isostearyl lactate and disostearyl malate;

- polyl esters and pentaerythritol esters, for instance dipentaerythrityl tetrahydroxystearate/tetraisostearate,

- esters of diol dimers and diacid dimers, such as Lusplan DD-DA5® and Lusplan DD-DA7®, sold by the NIPPON FINE CHEMICAL company and described in the application US 2004-175338,

- copolymers of a diol dimer and of a diacid dimer and esters thereof, such as copolymers of dilinoleyl diol dimers/dilinoleic dimers and esters thereof, for instance Plandool-G,

- copolymers of polyols and of diacid dimers, and esters thereof, such as Hailuscent ISDA, or the copolymer of dilinoleic acid/butanediol,

- fatty alcohols that are liquid at ambient temperature, with a branched and/or unsaturated carbon chain having from 12 to 26 carbon atoms, for instance 2-octyldecanol, isostearyl alcohol, oleyl alcohol, 2-hexyldecanol, 2-butyloctanol and 2-undecylpentadecanol,

- C_{12}-C_{22}, higher fatty acids, such as oleic acid, linoleic acid or linolenic acid, and mixtures thereof, and,

- dialkyl carbonates, the two alkyl chains possibly being identical or different, such as the dicaprylyl carbonate sold under the name CETIOL CC®, by COGNIS,

- oils of higher molar mass having in particular a molar mass ranging from approximately 400 to approximately 10,000 g/mol, in particular from approximately 650 to approximately 10,000 g/mol, in particular from approximately 750 to approximately 7500 g/mol, and more particularly ranging from approximately 1000 to approximately 5000 g/mol. As oils of higher molar mass that can be used in the invention, mention may in particular be made of the oils selected from:
lipophilic polymers,
linear fatty acid esters having a total carbon number ranging from 35 to 70,
hydroxylated esters,
unbranched and aromatic esters,
esters of C_4-C_{28} branched fatty acids or fatty alcohols,
silicone oils,
oils of plant origin,
and mixtures thereof;
- fluorine oils optionally partially hydrocarbon-based and/or silicone-based, such as fluorosilicone oils, fluorinated polyethers or fluorinated silicones, as described in document EP-A-847 752;
- silicone oils, such as polydimethylsiloxanes (PDMS) which are non-volatile and linear or cyclic; polydimethylsiloxanes comprising alkyl, alkoxy or phenyl groups which are pendant or at the end of the silicone chain, said groups having from 2 to 24 carbon atoms; phenylated silicones, such as phenyl trimethicones, phenyl dimethicones, phenyl-trimethylsiloxy-diphenylsiloxanes, diphenyl dimethicones, diphenylmethylidiphenyl-trisiloxanes or (2-phenylethyl)trimethylsiloxy-silicates, and mixtures thereof.

Among the linear or branched hydrocarbons, of mineral or synthetic origin, paraffin oils or petroleum jelly are preferably used.

Among the hydrocarbon oils of plant origin, it is possible to cite, preferably, plant oils, such as sweet almond oil, jojoba oil or macadamia nut oil.

Among the synthetic oils such as synthetic esters, isodecyl neopentanoate or isononyl isononanoate is used in particular, and among the synthetic ethers, dicapryl ether is preferably used.

Among the non-volatile silicone oils, polydimethylsiloxanes, phenyltrimethicone or alkyl dimethicones such as cetyl dimethicone are preferably used.

According to an embodiment, the fatty phase of the compositions of the invention represents a percentage ranging from 10% to 85%, and preferably ranging from 20% to 50% with respect to the total weight of the composition.

Thickeners
Depending on the fluidity of the composition that it is desired to obtain, one or more thickeners or gelling agents may be incorporated into a composition of the invention.

A thickener or gelling agent suitable for the invention may be hydrophilic, i.e. water-soluble or water-dispersible.

As hydrophilic gelling agents, mention may in particular be made of water-soluble or water-dispersible thickening polymers. Said polymers may in particular be selected from: modified or unmodified carboxyvinyl polymers, such as the products sold under the name Carbopol (CTFA name: carbomer) by the Goodrich company; polyacrylates and polymethacrylates, such as the products sold under the names Lubrajel and Norgel by the GUARDIAN company or under the name Hispapel by the HISPANO CHIMICA company; polycrylamides; 2-acrylamido-2-methylpropanesulfonic acid polymers and copolymers, which are optionally cross-linked and/or neutralized, such as the poly(2-acrylamido-2-methylpropanesulfonic acid) sold by the CLARIANT company under the name "Hostacerin AMPS" (CTFA name: ammonium polyacryldimethyltauramide); cross-linked anionic acrylamide/AMPS copolymers, in the form of a W/O emulsion, such as those sold under the name SEPIGEL 305 (CTFA name: Polyacrylamide/C13-14 Isoparaffin/Laureth-7) and under the name SIMULGEL 600 (CTFA name: Acrylamide/Sodium acryloyldimethyltaurate copolymer/Isohexadecane/Polysorbate 80) by the SEPPIC company; polysaccharide biopolymers, such as xanthan gum, guar gum, carob gum, gum acacia, scleroglucans, chitin derivatives and chitosan derivatives, carrageenans, gellans, alginates, or celluloses such as microcrystalline cellulose, carboxymethylcellulose, hydroxymethylcellulose and hydroxypropylcellulose; and mixtures thereof.

A thickener or gelling agent suitable for the invention may be lipophilic, it may be inorganic or organic.

As lipophilic thickeners, mention may, for example, be made of modified clays, such as modified magnesium silicate (Bentone gel VS38 of RHEOX), modified hectorites such as hectorite modified with a C₉ to C₂₂ fatty acid ammonium chloride, for instance hectorite modified with distearyldimethylammonium chloride, for instance the product sold under the name Bentone 38° by the ELEMENTIS company or that sold under the name "Bentone 38 CE" by the RHEOX company or that sold under the name Bentone Gel V5 5V by the ELEMENTIS company.

The polymeric organic lipophilic gelling agents are, for example partially or totally cross-linked elastomeric organopolysiloxanes with a three-dimensional
structure, such as those sold under the names KSG6®, KSG16® and KSG18® by the
SHIN-ETSU company, Trefil E-505C® and Trefil E-506C® by the DOW-CORNING
company, Gransil SR-CYC®, SR DMF10®, SR-DC556®, SR 5CYC gel®, SR DMF 10
gel® and SR DC 556 gel® by the GRANT INDUSTRIES company, SF 1204® and JK
113® by the GENERAL ELECTRIC company; ethylcellulose, such as the product
sold under the name Ethocel® by the DOW CHEMICAL company; polyamidetype
polycondensates resulting from condensation between a dicarboxylic acid
containing at least 32 carbon atoms and an alkylene diamine, and in particular
ethylene diamine, in which the polymer comprises at least one terminal carboxylic
acid group esterified or amidified with at least one monoalcohol or one monoamine
containing from 12 to 30 carbon atoms, and linear and saturated, and in particular
ethylendiamine/stearyl diniturate copolymers such as the product sold under the
name Uniclear 100 VG® by the ARIZONA CHEMICAL company; galactomannans
containing from one to six, and in particular from two to four, hydroxyl groups per
monosaccharide, substituted with a saturated or unsaturated alkyl chain, such as
guar gum alkylated with C1 to C6 alkyl chains, and in particular C1 to C3 alkyl chains,
and mixtures thereof. Block copolymers of the "diblock", "triblock" or "radial" type, of
the polystyrene/polyisoprene or polystyrene/polybutadiene type, such as those sold
under the name Luvitol HSB® by the BASF company, of the
dextrin/polyethylene-propylene type, such as those sold under the name
Kraton® by the SHELL CHEMICAL Company or of the polystyrene/copoly(ethylene-
butylene) type, blends of triblock and radial (star) copolymers in isododecane, such
as those sold by the PENRECO company under the name Versagel® for instance
the mixture of butylene/ethylene/styrene triblock copolymer and of
ethylene/propylene/styrene star copolymer in isododecane (Versagel M 5960).

Among the lipophilic gelling agents that can be used in a cosmetic
composition of the invention, mention may also be made of esters of dextrin
and of fatty acids, such as dextrin palmitates, in particular such as those sold under the
names Rheopearl TL® or Rheopearl KL® by the CHIBA FLOUR company,
hydrogenated plant oils, such as hydrogenated castor oil, fatty alcohols, in particular
C8 to C26, and more particularly C12 to C22, fatty alcohols, for instance myristyl
alcohol, cetyl alcohol, stearyl alcohol and behenyl alcohol.

According to an embodiment, a composition may comprise thickeners in a
content with respect to active material of from 0.01% to 40% by weight, especially
from 0.1% to 20% by weight, in particular from 0.3% to 15% by weight, relative to
the total weight of the composition.
According to a preferred embodiment, the composition includes at least one lipophilic thickener, in particular at least one modified hectorite, such as a hectorite modified by a C_{10} to C_{22} fatty acid ammonium chloride, advantageously in a content ranging from 0.1% to 5% by weight, in particular 0.5% to 2% by weight of active material with respect to the total weight of said composition.

**Fillers**

A composition according to the invention may also comprise at least one filler, of organic or inorganic nature, which makes it possible in particular to confer thereon additional properties of mattness, covering power and/or improved stability or staying power.

The filler content may range from 0.1% to 20% by weight, and in particular from 1% to 12% by weight with respect to the total weight of said composition.

The term "filler" should be understood to mean colorless or white solid particles of any shape, which are in a form that is insoluble or dispersed in the medium of the composition. Inorganic or organic in nature, they make it possible to confer body or rigidity on the composition, and/or softness, and uniformity on the makeup.

The fillers used in the compositions according to the present invention may be of lamellar, globular or spherical form, or in the form of fibers or in any other intermediate form between these defined forms.

The fillers may or may not be surface-coated, and in particular they may be surface-treated with silicones, amino acids, fluorinated derivatives or any other substance that promotes the dispersion and compatibility of the filler in the composition.

As examples of inorganic fillers, mention may be made of talc, mica, silica, hollow silica microspheres, kaolin, calcium carbonate, magnesium carbonate, hydroxyapatite, boron nitride, glass or ceramic microcapsules, composites of silica and of titanium dioxide, such as the TSG series sold by Nippon Sheet Glass.

As examples of organic fillers, mention may be made of polyamide powder (Nylon® Orgasol of Atochep), polyethylene powder, polymethyl methacrylate powder, polytetrafluoroethylene powder (Teflon), acrylic acid copolymer powder (Polysorbs of the Dow Corning company), lauroyl lysine, hollow polymeric microspheres such as those of polyvinylidene/acrylonitrile chloride, for instance Expancel (Nobel Industry), hexamethylene diisocyanate/Trimethylol hexyllactone copolymer powder (Plastic Powder of Toshiki), silicone resin microbeads (Tospearl
of Toshiba, for example) synthetic or natural micronized waxes, metal soaps derived from organic carboxylic acids having 8 to 22 carbon atoms, and preferably from 12 to 18 carbon atoms, for example, zinc stearate, magnesium stearate or lithium stearate, zinc laurate, magnesium myristate Polypore® L 200 (Chemdal Corporation), cross-linked elastomeric organopolysiloxane powders coated with silicone resin, in particular silsesquioxane resin, as described for example in the patent US 5 538 793, polyurethane powders, in particular, cross-linked polyurethane powders including a copolymer, in which said copolymer includes hexyllactone trimethylol. In particular, it may be a polymer of hexamethylene diisocyanate/trimethylol hexyllactone. Such particles are in particular commercially available, for example under the name PLASTIC POWDER D-400® or PLASTIC POWDER D-800® of the TOSHIKI company and mixtures thereof.

According to a particular embodiment of the invention, the composition includes at least one cross-linked elastomeric organopolysiloxane powder coated with silicone resin. The presence of this filler also enables the composition of the invention to be thickened and/or gelled.

The cross-linked elastomeric organopolysiloxane powder(s) coated with silicone resin may be present in a content ranging from 0.5% to 12% by weight, advantageously from 2% to 10% by weight and preferably from 7% to 9% by weight with respect to the total weight of said composition.

In particular, mention may be made of cross-linked elastomeric organopolysiloxane powders coated with silicone resin, in particular silsesquioxane resin, as described for example in the patent US 5 538 793. Such elastomer powders are sold under the names KSP-100®, KSP-101®, KSP-102®, KSP-103®, KSP-104® and KSP-105® by the SHIN ETSU company; mention may also be made of cross-linked elastomeric organopolysiloxane powder coated with silicone resin such as hybrid silicone powders functionalized by fluoroalkyl groups, in particular sold under the name "KSP-200" by the Shin Etsu company; or hybrid silicone powders functionalized by phenyl groups, in particular sold under the name "KSP-300" by the Shin Etsu company.

**Additives**

A cosmetic composition according to the invention may also further comprise any additive normally used in the field under consideration, for example selected from gums, anionic, cationic, amphoteric or nonionic surfactants, silicone surfactant agents, gums, resins, dispersants, semicrystalline polymers, antioxidants, essential
oils, preservatives, fragrances, neutralizing agents, antiseptics, anti-UV protective agents, cosmetic active agents, such as vitamins, hydrating agents, emollients or collagen-protecting agents, and mixtures thereof.

A person skilled in the art can adjust the type and amount of additives present in the compositions according to the invention by means of routine operations, so that the desired cosmetic properties and stability properties for these compositions are not affected by the additives.

**UV Filters**

The composition of the invention may also include at least one UV filter.

As a non-limiting illustration of UV filters, it is possible to cite the following families: anthranilates, in particular methyl anthranilate; benzophenones, in particular benzophenone-1, benzophenone-3, benzophenone-5, benzophenone-6, benzophenone-8, benzophenone-9, benzophenone-12, and preferably Benzophenone-2 (Oxybenzone), or Benzophenone-4 (Uvinul MS40® available from BASF); benzyldiene-camphors, in particular 3-benzyldene-camphor, benzyldiene-camphor-sulfonic acid, camphor benzalkonium methosulfate, polyacrylamidomethyl benzyldene camphor, terephthalylidenedicamphor sulfonic acid, and preferably 4-methylbenzyldiene camphor (Eusolex 6300® available from Merck); benzimidazoles, in particular benzimidazilate (Neo Heliopan AP® available from Haarmann and Reimer), phenylbenzimidazole sulfonic acid (Eusolex 232® available from Merck); benzotriazoles, in particular drometrizole trisiloxane, methylene bis-benzotriazolyl tetramethylbutylphenol (Tinosorb M® available from Ciba); cinnamates, in particular cinoxate, DEA methoxycinnamate, diisopropyl methylcinnamate, glyceryl ethylhexanoate dimethoxycinnamate, isopropyl methoxycinnamate, isoamylcinnamate, and preferentially ethocrylene (Uvinul N35® available from BASF), octyl methoxycinnamate (Parsole MCX® available from Hoffmann La Roche), or octocrylene (Uvinul 539® available from BASF): dibenzoylmethanes, in particular butylmethoxydibenzoylmethane (Parsole 1789®); imidazolines, in particular ethylhexyl dimethoxybenzylidene dioximidazoline; PABAs, in particular ethyl dihydroxypropyi PABA, ethylhexyldimethyl PABA, glyceryl PABA, PABA and PEG-25 PABA, and preferentially diethylhexylbutamidotriazone (Uvasorb HEB® available from 3V Sigma), ethylhexyltriazone (Uvinul T150® available from BASF) or ethyl PABA (bezocaine): salicylates, in particular dipropylene glycol salicylate, ethylhexyl salicylate, homosalate, or TEA salicylate; triazines, in particular anisotriazine
(Tinosorb S® from Ciba); drometrizole trisiloxane, zinc oxide, titanium dioxide, and zinc, iron, zirconium or cerium oxide, coated or not.

Preferably, cinnamates, salicylates and mixtures thereof, or titanium dioxide are preferably used. According to an embodiment, the composition of the invention includes a UV filter chosen from the cinnamates.

According to a particular embodiment, octylmethoxycinnamate, also called ethyl hexyl methoxycinnamate is preferably used.

The quantity of filters is dependent on the desired end use. It may range, for example, from 1 to 20% by weight and more preferably from 2 to 10% by weight with respect to the total weight of the composition.

A cosmetic makeup composition of the invention may be in the form of a liquid or fluid foundation, a hot-poured foundation product, a body makeup product, a concealer, an eye shadow, or a makeup base.

A skincare composition according to the invention may in particular be a sunscreen composition, a skincare cream, a serum or a deodorant.

Preferably, the composition of the invention is in the form of a foundation.

The composition according to the invention may be applied by any means enabling a uniform distribution, in particular using a finger, or a cotton ball, a rod, a brush, gauze, a spatula or a buffer, or by spraying, and can be removed by rinsing with water or using a gentle detergent.

The composition of the invention may be implemented so as to improve the general state of the epidermis, in particular the skin, and in particular to maintain or restore its physiological functions and/or its aesthetic appearance.

Thus, the composition of the invention may advantageously be implemented in order to fight aging of the epidermis, to maintain and/or stimulate hydration and/or to combat drying of the skin, to improve skin tone, maintain or restore flexibility and elasticity of the skin, improve mineralization of the epidermis, improve vitality of the epidermis, facilitate inter-cellular exchanges, and fight chapping and a cracking appearance of the skin.

A composition according to the invention may be intended for a cosmetic and/or dermatological application.

The invention also relates to the non-therapeutic cosmetic use in a cosmetic composition for skincare and/or makeup, of at least one coloring agent and at least one jasmonic acid derivative compound of formula (I) as defined above, and at least one silicone surfactant of formula (II) as defined above in order to prevent skin aging.
The invention also relates to the non-therapeutic cosmetic use of at least one coloring agent and at least one jasmonic acid derivative compound of formula (I) as defined above, and at least one silicone surfactant of formula (II) as defined above in order to prevent skin aging.

The invention also relates to a cosmetic treatment method including the application on the skin of a composition as defined above.

The invention also relates to a non-therapeutic skincare and/or makeup method including a step of applying at least one layer of a composition as defined above on the skin.

The invention also relates to a skin makeup method in which a composition as defined above is applied.
EXAMPLES

Examples 1 to 6: Influence of the nature of the surfactant

Examples 1 to 6 of the W/O emulsion make it possible to show the influence of the structure of the surfactant on stability.

For all of these examples, the surfactant content is 2% by mass. When the latter is mixed with one or more other constituents, the content of the mixture is adjusted so as to preserve this value.

<table>
<thead>
<tr>
<th>EXAMPLES 1-6</th>
<th>Silicon surfactant</th>
<th>mass %</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Modified hectorite sold under reference BENTONE 38 VCG by the ELEMENTIS company</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Polydimethylsiloxane (5 cSt)</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>Polydimethylsiloxane (10 cSt)</td>
<td>5.00</td>
</tr>
<tr>
<td></td>
<td>Mixture of methyl, ethyl, propyl, butyl, isobutyl p-hydroxybenzoates / phenoxy -2 ethanol sold under reference Phenonip by the Clariant company</td>
<td>1.00</td>
</tr>
<tr>
<td>B</td>
<td>Deionized water</td>
<td>sq</td>
</tr>
<tr>
<td></td>
<td>Glycerol</td>
<td>10.00</td>
</tr>
<tr>
<td></td>
<td>Sodium salt of 3- hydroxy-2-pentyl-cyclopentane acetic acid in a water/dipropylene glycol mixture (32/48/20)</td>
<td>6.70</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>100%</td>
</tr>
</tbody>
</table>

The compositions of examples 1 to 6 were prepared according to the following procedure.

Procedure

The constituents of phase A are weighed into the main beaker, then homogenized using a Raynerie mixer at a speed of 400 rpm at room temperature.

The constituents of phase B are weighed separately and homogenized by means of a magnetic mixer at room temperature.

Then the emulsification is produced by pouring phase B into the main beaker while progressively increasing the agitation speed to 2500 rpm, which agitation is then continued for 5 to 10 minutes according to the consistency of the product.

It is then agitated for two more minutes at 1500 rpm and the product is packaged in a glass jar.

Emulsification results
The macroscopic quality of the emulsion is examined once the agitation has been completed:

<table>
<thead>
<tr>
<th>Silicone surfactant</th>
<th>Ex. 1 (Invention)</th>
<th>Ex. 2 (Invention)</th>
<th>Ex. 3 (Invention)</th>
<th>Ex. 4 (Invention)</th>
<th>Ex. 5 (Comparative)</th>
<th>Ex. 6 (Comparative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEG 9 polydimethylsiloxane</td>
<td>Lauryl PEG 9 polydimethylsiloxane</td>
<td>Polyglyceryl-3 polydimethylsiloxane</td>
<td>Lauryl polyglyceryl-3 polydimethylsiloxane</td>
<td>Cetyl PEG/PPG 10/1 dimethicone</td>
<td>Lauryl glyceryl dimethicone</td>
<td></td>
</tr>
</tbody>
</table>

| % X   | 2.05  | 2.00  | 2.00 | 2.00 | 2.00 | 2.22 |
| % Water | 64.85 | 64.90 | 64.90 | 64.90 | 64.90 | 64.68 |

| Stability | Homogeneous white emulsion | Homogeneous white emulsion | Homogeneous white emulsion | Unstable emulsion. Phase separation. | Unstable emulsion. Phase separation. |

The silicone surfactants that do not comprise silicone side chains (Comparative examples 5 and 6) do not enable a stable emulsion to be obtained.

**Examples 7 to 11: Foundations**

Examples 7 to 11 describe W/O foundations that also enable the influence of the surfactant structure on stability to be demonstrated.

For all of these examples, the surfactant content is 4% by mass. When the latter is mixed with one or more other constituents, the content of the mixture is adjusted so as to preserve this value.

### EXAMPLES 7-11

<table>
<thead>
<tr>
<th>A1</th>
<th>Silicone surfactant</th>
<th>X</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2</td>
<td>Modified hectorite sold under reference BENTONE 38 VCG by the ELEMENTIS company</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>Polydimethylsiloxane (5 cSt)</td>
<td>10.80</td>
</tr>
<tr>
<td></td>
<td>Polydimethylsiloxane (10 cSt)</td>
<td>10.00</td>
</tr>
<tr>
<td>A3</td>
<td>Yellow iron oxide coated with aluminum stearoyl glutamate</td>
<td>2.15</td>
</tr>
<tr>
<td></td>
<td>Red iron oxide coated with aluminum stearoyl glutamate</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td>Black iron oxide coated with aluminum stearoyl glutamate</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>Titanium dioxide coated with aluminum stearoyl glutamate</td>
<td>8.98</td>
</tr>
<tr>
<td>B</td>
<td>Deionized water</td>
<td>sq</td>
</tr>
<tr>
<td></td>
<td>Glycerol</td>
<td>5.00</td>
</tr>
<tr>
<td></td>
<td>Sodium salt of 3-hydroxy-2-pentyl-cyclopentane acetic acid in a water/dipropylene glycol mixture (32/48/20)</td>
<td>6.70</td>
</tr>
<tr>
<td></td>
<td>Mixture of methyl, ethyl, propyl, butyl, isobutyl p-hydroxybenzoates / phenoxy -2 ethanol sold under reference Phenopip by the Clariant company</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>100%</td>
</tr>
</tbody>
</table>
The compositions of examples 7 to 11 were prepared according to the following procedure:

**Procedure**

The constituents of phase A2 are weighed into the main beaker and mixed by means of a magnetic mixer for 30 minutes at 75-80 °C.

Then phase A1 is added, still under magnetic agitation.

Phase 3 is prepared separately by grinding three times, in a three-roll mill, the mixture of pigments and polydimethylsiloxane.

Then, the pigment phase is added to the main beaker by mixing with a Moritz mixer at a speed of 1000 to 1200 rpm for 15 minutes while keeping the beaker at room temperature by means of a water bath.

The constituents of phase B are weighed separately and homogenized by means of a magnetic mixer at room temperature.

Then the emulsification is produced at close to room temperature, by pouring phase B into the main beaker while progressively increasing the agitation speed to 4500 rpm, which agitation is then continued for 10 minutes.

The product is finally packaged in a glass jar.

**Emulsification results**

The macroscopic quality of the emulsion is examined once the agitation has been completed:

<table>
<thead>
<tr>
<th></th>
<th>Ex. 7 (Invention)</th>
<th>Ex. 8 (Invention)</th>
<th>Ex. 9 (Invention)</th>
<th>Ex. 10 (Comparative)</th>
<th>Ex. 11 (Comparative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicone surfactant</td>
<td>PEG 9 polydimethylsiloxeyl dimethicone sold under reference KF 6028 by Shin-Etsu</td>
<td>Lauryl PEG 9 polydimethylsiloxyethyl dimethicone sold under reference KF 6038 by Shin-Etsu</td>
<td>Polymagrecyl-3 polydimethylsiloxeyl dimethicone sold under reference KF 6014 by Shin-Etsu</td>
<td>Cetyl PEG/PPG 10/1 dimethicone sold under reference Abil EM 90 by Evonik/Goldscmidt</td>
<td>Lauryl glycerol dimethicone sold under reference KC2200 by Evonik</td>
</tr>
<tr>
<td>% X</td>
<td>4.10</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.44</td>
</tr>
<tr>
<td>% Water</td>
<td>42.80</td>
<td>42.90</td>
<td>42.90</td>
<td>42.90</td>
<td>42.46</td>
</tr>
</tbody>
</table>
The silicone surfactants that do not comprise silicone side chains (Comparative examples 10 and 11) do not enable a stable foundation to be obtained.

**Examples 12 and 13: Foundations**

<table>
<thead>
<tr>
<th>Example 12</th>
<th>Example 13</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A1</strong></td>
<td><strong>A2</strong></td>
</tr>
<tr>
<td>Lauryl PEG 9 polydimethylsiloxylethyl dimethicone sold under reference KF 6038 by the Shin-Etsu company</td>
<td>-</td>
</tr>
<tr>
<td>Ethyl hexyl methoxycinnamate</td>
<td>-</td>
</tr>
<tr>
<td>7.50</td>
<td>8.00</td>
</tr>
<tr>
<td>7.50</td>
<td>2cSt dimethicone</td>
</tr>
<tr>
<td><strong>A5</strong></td>
<td><strong>B</strong></td>
</tr>
<tr>
<td>Yellow iron oxide coated with aluminum stearoyl glutamate</td>
<td>Deionized water</td>
</tr>
<tr>
<td>2.03</td>
<td>Butylene glycol</td>
</tr>
<tr>
<td>2.03</td>
<td>5.00</td>
</tr>
<tr>
<td>0.58</td>
<td>Phenoxethanol</td>
</tr>
<tr>
<td>0.17</td>
<td>Magnesium sulfate</td>
</tr>
<tr>
<td>0.17</td>
<td>Sorbitol</td>
</tr>
<tr>
<td>0.17</td>
<td></td>
</tr>
<tr>
<td>10.22</td>
<td></td>
</tr>
<tr>
<td>0.50</td>
<td></td>
</tr>
<tr>
<td>0.50</td>
<td></td>
</tr>
<tr>
<td>25.64</td>
<td></td>
</tr>
<tr>
<td>28.67</td>
<td></td>
</tr>
<tr>
<td>7.06</td>
<td>7.06</td>
</tr>
<tr>
<td>7.06</td>
<td></td>
</tr>
<tr>
<td>7.06</td>
<td></td>
</tr>
</tbody>
</table>

**Procedure**

The constituents of phase A1 are weighed into the main beaker, then homogenized with a Moritz mixer at a speed of 1200-1400 rpm at room temperature.

Phase A2 followed by phase A3 are then added, which have been previously prepared by mashing by hand, and, finally, phase A4 is added, while agitating for 15 minutes until homogenization.

Phase A5 is prepared separately by grinding three times, in a three-roll mill, the mixture of pigments and cyclohexasiloxane.
Phase A5 is added to the main beaker while progressively increasing the agitation speed of the Moritz mixer to 1400-1500 rpm, then the agitation is continued for 20 minutes while keeping the beaker at room temperature by means of a water bath.

The constituents of phase B are weighed separately, with the exception of the jasmonic acid derivative and the phenoxyethanol. It is homogenized using a magnetic mixer at a temperature of around 30-35°C, then the jasmonic acid derivative and the phenoxyethanol are incorporated.

Then the emulsification is produced at room temperature by pouring phase B into the main beaker and progressively increasing the agitation speed to 4000 rpm, and then maintaining it at that speed for 10 minutes.

The agitation speed is then slightly reduced and the ethanol and the perfume are added. The mixture is agitated again for two minutes and the product is packaged in a glass jar.

**Stability results.**

The formulas of examples 12 and 13 are stable for 1 month at 4°C, 20°C and 37°C, i.e. they do not show any macroscopic change at these temperatures.

The stabilities at room temperature (20°C) are tested on 300g of product, packaged in a 660ml glass jar that is hermetically sealed with an aluminum lid.

The stabilities at 4°C and 37°C are tested on 20g of product, packaged in a 30ml glass jar that is hermetically sealed.

**Sensory evaluations.**

We asked a panel of 5 women, between the ages of 22 to 50 years, to apply the two foundations.

This evaluation shows found that the foundation of example 12 is easy to apply and leads to a uniform makeup result that shows few wrinkles. To the touch, the foundation film is soft, non-sticky and non-oily.

Similarly, the evaluation shows that the foundation of example 13 is easy to apply and results in uniform makeup. To the touch, the foundation film is soft.
CLAIMS

1. Composition, in the form of a water-in-oil emulsion including an aqueous phase dispersed in a fat phase, in which said composition includes a physiologically acceptable medium containing:
   - at least one jasmonic acid derivative compound with the following formula (I):

\[
\begin{align*}
&\text{OH} \\
&\text{R}_2 \\
&\text{R}_1 \\
\end{align*}
\]

(I)

in which:
   - \(R_1\) represents a radical \(\text{COOR}_3\), with \(R_3\) designating a hydrogen atom or a C1-C4 alkyl radical, optionally substituted by one or more hydroxyl groups;
   - \(R_2\) represents a hydrocarbon radical, saturated or unsaturated, and linear including 1 to 18 carbon atoms, or branched or cyclic including 3 to 18 carbon atoms;
   - as well as their optical isomers and corresponding salts; and
   - at least one silicone surfactant with the following formula (II):

\[
R^1_a R^2_b R^3_c SiO(4-\ a-b-c)/2
\]

(H)

in which:
   - \(a\) is between 1.0 and 2.5;
   - \(b\) is between 0.001 and 1.5;
   - \(c\) is between 0.001 and 1.5;
   - \(R^1\) is an alkyl radical including 1 to 30 carbon atoms,
   - \(R^2\) is a hydrophilic group with the formula \(-\text{C}_m\text{H}_{2m-1}-\text{X}\), in which:
     - \(m\) is equal to 0 or less than or equal to 20;
     - \(X\) is:
       - a radical of formula \(\text{[C}_2\text{H}_2\text{O}]_d\text{[C}_3\text{H}_6\text{O]}_e R^4\) in which:
         - \(d\) is between 2 and 200;
         - \(e\) is equal to 0 or less than or equal to 200;
         - \(R^4\) is a hydrogen atom or an alkyl radical including 1 to 30 carbon atoms,
       - or a radical of formula \(\text{[CH}_2\text{CH(OH)CH}_2]\), \(R^5\) in which:
         - \(f\) is between 1 and 20;
. $R^5$ is a hydrogen atom or an alkyl radical including 1 to 30 carbon atoms,

* $R^3$ is a silicone group of formula $-\text{C}_g\text{H}_{2g-1}(\text{SiR} \_2^0)h-\text{Si}(\text{R})3$ in which:
  . $g$ is between 1 and 5,
  . $h$ is between 1 and 500, and preferably between 1 and 50;
  . $R$ is an alkyl radical including 1 to 30 carbon atoms;
  . the molecular weight of said surfactant is between 500 g.mol$^{-1}$ to 200,000 g.mol$^{-1}$.

2. Composition according to claim 1, in which, in formula (I), $R_1$ is chosen from the group consisting of: $-\text{COOH}$, $-\text{COOCH}_3$, $-\text{COO-CH}_2\text{-CH}_3$, $-\text{COO-CH}_2\text{-CH(OH)}\text{-CH}_2\text{OH}$, $-\text{COOCH}_2\text{-CH}_2\text{-CH}_2\text{OH}$ et $-\text{COOCH}_2\text{-CH(OH)}\text{-CH}_3$.

3. Composition according to claim 1 or 2, which, in formula (I), $R_2$ is a hydrocarbon radical, linear, saturated or unsaturated, having 2 to 7 carbon atoms.

4. Composition according to any one of claims 1 to 3, in which, in formula (I), $R_1$ is $-\text{COOH}$.

5. Composition according to any one of claims 1 to 4, in which, in formula (I), $R_2$ is chosen from the group consisting of pentyl, pentenyl, hexyl and heptyl radicals.

6. Composition according to any one of claims 1 to 5, in which the compound of formula (I) is 3-hydroxy-2-pentyl-cyclopentane acetic acid or 3-hydroxy-2-pentyl-cyclopentane acetic acid sodium salt.

7. Composition according to any one of claims 1 to 6, in which the compound of formula (I) is brought to the aqueous phase and in a content ranging from 0.001 % to 10%, in particular from 0.1% to 8%, and preferably from 0.5% to 5% by weight with respect to the total weight of said composition .

8. Composition according to any one of claims 1 to 7, in which the silicone surfactant with the following formula (II):

$$R^1_\text{a}R^2_\text{b}R^3_\text{cSiO(4-}\text{a-b-c})/2$$

in which :
* a is between 1.2 and 2.3;
* b is between 0.05 and 1.0;
* c is between 0.05 and 1.0;
* R is an alkyl radical including 1 to 30 carbon atoms, with at least 50%, preferably at least 70%, of R groups representing a methyl group;
* R\(^2\) is a hydrophilic group of formula -C\(_m\)H\(_{2m}\)-0-X (III)
in which:
  . m is equal to 0 or less than or equal to 20;
  . X is:
    - or a radical of formula -[C\(_2\)H\(_4\)O\(_d\)][C\(_3\)H\(_6\)O\(_e\)]R\(^4\) (IV)
in which:
      . d is between 5 and 100;
      . e is between 0 and 100;
      . R\(^4\) is a hydrogen atom;
    - or a radical of formula -[CH\(_2\)CH(OH)CH\(_2\)O\(_f\)]R\(^5\) (V)
in which:
      . f is between 1 and 20;
      . R\(^5\) is a hydrogen atom;
* R\(^3\) is a silicone group of formula -C\(_9\)H\(_{2g}\)-(SiR\(_2\)O\(_h\))h-Si(R)\(_3\) (VI)
in which:
  . g is between 1 and 5, and is preferably equal to 2;
  . h is between 3 and 100;
  . R is an alkyl radical including 1 to 30 carbon atoms;
  the molecular weight of said silicone surfactant is between 500 g.mol\(^{-1}\) and 200,000 g.mol\(^{-1}\).

9. Composition according to any one of claims 1 to 8, in which the silicone surfactant of formula (II) is present in a content of between 0.1% and 15%, preferably 0.5% to 10%, and even more preferably 1% to 6% by weight with respect to the total weight of said composition.

10. Composition according to any one of claims 1 to 9, in which the silicone surfactant of formula (II) is chosen from the group consisting of PEG-9 polydimethylsiloxoxyethyl dimethicone, lauryl PEG-9 polydimethylsiloxoxyethyl dimethicone, polyglyceryl-3 polydimethylsiloxoxyethyl dimethicone and lauryl polyglyceryl-3 polydimethylsiloxoxyethyl dimethicone.
11. Composition according to any one of claims 1 to 10, also including a coloring agent, preferably in the form of pigments.

12. Composition according to any one of claims 1 to 11, in which the aqueous phase includes water, as the case may be in a mixture with water-soluble additives and/or solvents.

13. Composition according to any one of claims 1 to 12, one UV filter, including at least one UV filter, in which said UV filter is preferably chosen from the cinnamates, and is preferably ethylhexyl methoxycinnamate.

14. Composition according to any one of claims 1 to 13, in the form of a fluid foundation.

15. Non-therapeutic cosmetic use, of at least one silicone surfactant of which the molecular weight is between 500 g.mol⁻¹ and 200,000 g.mol⁻¹, and at least one jasmonic acid derivative compound, for preventing skin aging, in which the jasmonic acid derivative compound satisfies the following formula (I):

\[
\text{OH}
\]

\[
\begin{array}{c}
\text{R}_1 \\
\text{R}_2 \\
\text{R}_3
\end{array}
\]

(II)

in which:
- \( R_1 \) represents a radical \( \text{COOR}_3 \), with \( R_3 \) designating a hydrogen atom or a C1-C4 alkyl radical, optionally substituted by one or more hydroxyl groups;
- \( R_2 \) represents a hydrocarbon radical, saturated or unsaturated, and linear including 1 to 18 carbon atoms, or branched or cyclic including 3 to 18 carbon atoms;
- as well as their optical isomers and corresponding salts; and
- said silicone surfactant responds to the following formula (II):

\[
R^1aR^2bR^3cSiO(4-a-b-c)/2
\] (II)

in which:
- a is between 1.0 and 2.5;
- b is between 0.001 and 1.5;
c is between 0.001 and 1.5;
R is an alkyl radical including 1 to 30 carbon atoms
R is a hydrophilic group with the formula \(-C_m^rH_{2m}^r-0-X\)
in which:
  . m is equal to 0 or less than or equal to 20;
  X is:
    - a radical of formula \(-[C_2H40]d[C3H60]eR^4\)
in which:
      . d is between 2 and 200;
      . e is equal to 0 or less than or equal to 200;
    . R is a hydrogen atom or an alkyl radical including 1 to 30 carbon atoms,
    - or a radical of formula \(-[CH_2CH(OH)CH_20], R^5\)
in which:
      . f is between 1 and 20;
    . R is a hydrogen atom or an alkyl radical including 1 to 30 carbon atoms,
  * R is a silicone group of formula \(-C_8H_{2g}^s(SiR_2^s0)h-Si(R)_3\)
in which:
    . g is between 1 and 5, and is preferably equal to 2;
    . h is between 1 and 500, and preferably between 1 and 50;
    . R is an alkyl radical including 1 to 30 carbon atoms.

16. Non-therapeutic skincare and/or makeup method including a step of applying, on the skin, at least one layer of a composition according to any one of claims 1 to 14.