Abstract:
The present invention relates to a mixture of alkanes comprising at least n-dodecane and n-tetradecane, characterized in that n-dodecane and n-tetradecane represent at least 90 wt.% of said mixture and in that the content by weight of n-tetradecane in said mixture is strictly above 50 wt.%, relative to the total weight of said mixture.
Mixture of hydrocarbon solvents

The present invention relates to a novel mixture of alkanes, as well as its use as solvent in cosmetic and/or dermatological compositions. It also relates to cosmetic and/or dermatological compositions comprising said mixture.

Cosmetic and/or dermatological compositions often comprise a fatty phase containing a volatile solvent. In fact, this enables the properties of the product to develop during and after deposition, leading then, depending on the cosmetic product in question, to properties of comfort or of texture during application of the product, durability of the deposited product, as well as to specific mechanical or optical properties of the deposits. It may also participate in dissolution of active substances and/or dispersion of solid particles in the composition.

Volatile solvents are used conventionally in the fields of care, hygiene, hair products, perfumes and make-up, in very varied galenic forms: direct or inverted emulsions, anhydrous pastes, anhydrous sticks, solid emulsions, etc.

Within the scope of the formulation of cosmetic and/or dermatological compositions, it would be advantageous to have novel volatile solvents, making it possible to obtain compositions having at least some of the properties mentioned above.

It would also be advantageous to have volatile solvents that further satisfy current legislation concerning volatile organic compounds (VOC), and notably volatile solvents having a boiling point above 216°C at atmospheric pressure and a saturated vapour pressure below 0.1 mmHg at 20°C.

The applicant unexpectedly discovered that a particular mixture of alkanes meets the criteria stated above and thus endows compositions with excellent cosmetic properties such as good spreading and/or non-greasy feel and/or comfort and/or non-transfer and/or non-migration for example. This list of properties is not exhaustive and more generally, the particular mixture of alkanes considered according to the invention has good compatibility with other constituents usually present in cosmetic and/or dermatological compositions and endows the composition with most of the properties conventionally desired.

The present invention thus relates, according to one of its aspects, to a mixture of alkanes comprising at least n-dodecane and n-tetradecane, characterized in that n-
dodecane and n-tetradecane represent at least 90 wt.% of said mixture and in that the content by weight of n-tetradecane in said mixture is strictly above 50 wt.%, relative to the total weight of said mixture.

Advantageously, the mixture of alkanes according to the invention has a boiling point above 216°C at atmospheric pressure and a saturated vapour pressure below 0.1 mmHg at 20°C, while endowing the compositions in which it is formulated with good cosmetic properties.

The invention also relates, according to another of its aspects, to a cosmetic and/or dermatological composition comprising at least one mixture of alkanes as defined previously.

It also relates to the use of a mixture of alkanes as defined previously as a solvent in a cosmetic and/or dermatological composition.

The invention also relates, according to another of its aspects, to a cosmetic and/or dermatological composition comprising at least:

- a mixture of alkanes comprising at least n-dodecane and n-tetradecane, in which n-dodecane and n-tetradecane represent at least 90 wt.% of said mixture and in which the content by weight of n-tetradecane is greater than or equal to 40 wt.% relative to the total weight of said mixture, and
- an oil having a viscosity less than or equal to 0.01 Pa.s., a surface tension between 21 and 31 mN/m and a rate of evaporation below 0.002 mg/cm²/min.

**MIXTURE OF ALKANES**

As stated previously, the mixture of alkanes according to the invention comprises at least n-dodecane and n-tetradecane in proportions representing at least 90 wt.% of said mixture.

According to one embodiment, the mixture of alkanes according to the invention can comprise at least 95 wt.%, in particular at least 97 wt.%, relative to its total weight, of n-dodecane and of n-tetradecane.

The content by weight of n-tetradecane in the mixture of alkanes according to the invention is strictly above 50 wt.%, relative to the weight of said mixture. It is therefore in particular strictly greater than the content by weight of n-dodecane in said mixture.
According to one embodiment, the content by weight of n-tetradecane can be for example greater than or equal to 52 wt.%, for example between 52 and 98 wt.%, in particular greater than or equal to 54 wt.%, for example between 54 and 96 wt.%, for example greater than or equal to 56 wt.%, for example between 56 and 94 wt.%, for example greater than or equal to 60 wt.%, for example greater than or equal to 70 wt.%, for example greater than or equal to 80 wt.%, for example greater than or equal to 90 wt.%, relative to the total weight of the mixture of alkanes according to the invention.

According to one embodiment, the content by weight of n-dodecane can be for example less than or equal to 48 wt.%, for example between 2 and 48 wt.%, for example less than or equal to 46 wt.%, for example between 4 and 46 wt.%, for example less than or equal to 44 wt.%, for example between 6 and 44 wt.%, for example less than or equal to 40 wt.%, for example less than or equal to 30 wt.%, for example less than or equal to 20 wt.%, for example less than or equal to 10 wt.%, relative to the total weight of the mixture of alkanes according to the invention.

The [n-tetradecane/n-dodecane] weight ratio can for example be from 1.01 to 9, for example from 1.01 to 4, for example from 1.01 to 3, for example from 1.01 to 2, for example from 1.01 to 1.80, preferably from 1.02 to 1.60, and in particular from 1.05 to 1.4.

The n-dodecane and the n-tetradecane that can be used to form the mixture of alkanes according to the invention can be of natural or synthetic origin. They can advantageously be of vegetable origin.

It can notably be the n-dodecane sold under the reference PARAFOL 12-97 by the company. SASOL or under the references Vegelight 12 or Vegelight 12-99 by the company Biosyntis, and the n-tetradecane sold under the reference PARAFOL 14-97 by the company SASOL or under the reference Vegelight 14 by the company Biosynthis.

The mixture of alkanes according to the invention is constituted solely of n-dodecane and n-tetradecane.

In other words, the proportion of n-dodecane and n-tetradecane represents about 100 wt.% of said mixture.

For example, n-tetradecane can represent 51 to 98 wt.% of said mixture, preferably from 51 to 90 wt.% of said mixture, for example from 51 to 80 wt.% of said mixture, for example from 51 to 70 wt.% of said mixture, for example from 51 to 60 wt.% of said mixture, or even from 52 to 55 wt.% of said mixture, and n-dodecane from 2 to
49 wt.% of said mixture, for example from 10 to 49 wt.% of said mixture, for example from 20 to 49 wt.% of said mixture, for example from 30 to 49 wt.% of said mixture, preferably from 40 to 49 wt.%, or even from 45 to 48 wt.% of said mixture.

Of course, other ancillary constituents, for example impurities such as other hydrocarbons (notably decane, hexane or isododecane) can however be present at trace levels, i.e. in proportions below 5 wt.%, for example below 3 wt.%, preferably below 2 wt.%, relative to the total weight of said mixture.

**COSMETIC AND/OR DERMATOLOGICAL COMPOSITIONS**

As stated previously, the present invention also relates to the use of a mixture of alkanes as defined previously as a solvent in a cosmetic and/or dermatological composition.

The present invention also relates to a cosmetic and/or dermatological composition comprising at least one mixture of alkanes as defined previously.

**Physiologically acceptable medium**

"Physiologically acceptable medium" means a medium that is non-toxic and can be applied on the skin, notably of the body, hands, neck, face, lips and/or keratin fibres, of human beings. The physiologically acceptable medium is generally adapted to the nature of the substrate on which the composition is to be applied as well as to the form in which the composition is intended to be packaged.

Oils can be classified in two categories, namely volatile or non-volatile, depending on the value of their rate of evaporation evaluated according to the following protocol.

Put 15 g of the oil or of the mixture of oils to be tested in a crystallizing dish (diameter: 7 cm) placed on a balance inside an enclosure of about 0.3 m³ with controlled temperature (25°C) and hygrometry (relative humidity 50%).

Allow the liquid to evaporate freely, without stirring, providing ventilation with a fan (PAPST-MOTOREN, reference 8550 N, running at 2700 rev/min) arranged in the vertical position above the crystallizing dish containing the solvent, the vanes being directed towards the crystallizing dish and at a distance of 20 cm relative to the bottom of
the crystallizing dish. The rates of evaporation are expressed in mg of oil evaporated per unit area (cm$^2$) and per unit time (minute).

As a guide, the amount by weight of volatile oil evaporated after 30 minutes for certain volatile oils according to this protocol is given below:

- isododecane: 24 mg/cm$^2$,
- octamethyl cyclotetrasiloxane (D4): 18.7 mg/cm$^2$,
- decamethyl cyclohexasiloxane (D5): 4.1 mg/cm$^2$.

The volatile oils are those for which measurement of evaporation gives values in the range from 0.01 to 200 mg/cm$^2$/min.

As an example, dodecafluoropentane has a rate of 171.26 mg/cm$^2$/min and diethyl dodecane a rate of 0.003 mg/cm$^2$/min.

**Additional volatile oil**

The composition according to the invention can further comprise at least one additional volatile oil different from the mixture of aikanes considered according to the invention.

"Volatile oil" means an oil (or non-aqueous medium) that may evaporate when in contact with the skin or keratin fibres, and in particular oils for which measurement of evaporation according to the protocol described above gives values in the range from 0.01 to 200 mg/cm$^2$/min.

Among these additional volatile oils, we may mention cyclic or non-cyclic silicone volatile oils, or non-silicone volatile oils, notably selected from hydrocarbon or fluorinated volatile oils, and mixtures thereof.

Among "cyclic or non-cyclic silicone volatile oils" we may notably mention linear ones having a viscosity ≤ 6 centistokes (6 x 10$^{-6}$ m$^2$/s), and notably having from 3 to 10 silicon atoms, said silicones optionally having one or more alkyl or alkoxy groups having 1 or 2 carbon atoms. In this category of silicone volatile oils usable in the invention, we may notably mention octamethyl cyclotetrasiloxane, decamethyl cyclopentasiloxane, dodecamethyl cyclohexasiloxane, heptamethyl hexyltrisiloxane, heptamethylhexyloctyl trisiloxane, hexamethyl disiloxane, octamethyl trisiloxane, decamethyl tetrasiloxane, dodecamethyl pentasiloxane and mixtures thereof.
The non-cyclic silicone volatile oils can also be selected from the linear or branched silicone volatile oils.

The additional volatile hydrocarbon oil can be selected from volatile hydrocarbon oils having from 8 to 16 carbon atoms and mixtures thereof and notably branched C₈₋C₁₆ alkanes such as isoalkanes (also called isoparaffins), isododecane (also called 2,2,4,4,6-pentamethylheptane), isodecane, isohexadecane and for example the oils sold under the trade names Isopars® or Permethyls®.

Other volatile hydrocarbon oils can be selected from:

1) The esters of formula R₁COOR₂ in which R₁ represents a hydrogen atom H or a linear or branched hydrocarbon radical and R₂ represents a linear or branched hydrocarbon radical, provided that
   - when R₂ is a linear hydrocarbon radical and R₁ is H or a linear hydrocarbon radical, R₁ + R₂ ≤ 9; and
   - when at least one of R₁ and R₂ is a branched hydrocarbon radical,

\[ R₁ + R₂ ≤ 11. \]

2) The ketones of formula R₁-CO-R₂ in which R₁ and R₂ are identical or different and represent a linear or branched hydrocarbon radical, provided that:
   - when R₁ and R₂ are linear, they each contain from 1 to 8 carbon atoms with R₁ + R₂ ≤ 8; and
   - when R₁ and/or R₂ are branched, they each contain from 1 to 10 carbon atoms with R₁ + R₂ ≤ 11.

3) The ethers of formula R₁-0-R₂, in which R₁ and R₂ are identical or different and represent a linear or branched hydrocarbon radical, provided that:
   - when R₁ and R₂ are linear, they each contain from 1 to 10 carbon atoms with R₁ + R₂ ≤ 11; and
   - when R₁ and/or R₂ are branched, they each contain from 1 to 12 carbon atoms with R₁ + R₂ ≤ 13.

4) The esters of carbonic acid of formula R₁-0-CO-0-R₂, in which R₁ and R₂ are identical or different and represent a linear or branched hydrocarbon radical, provided that:
   - when R₁ and R₂ are linear, they each contain from 1 to 6 carbon atoms with R₁ + R₂ ≤ 8; and
- when R1 and/or R2 are branched, they each contain from 1 to 8 carbon atoms with R1 + R2 ≤ 10.

In these various formulae 1) to 4), R1 and R2 are selected independently of one another and are two separate radicals, i.e. they are not joined together by a covalent bond. Preferably, R1 and R2 are alkyl radicals.

Other volatile hydrocarbon oils such as petroleum distillate, notably those sold under the designation "SHELL SOLT®" by the company SHELL, can be used.

Non-volatile oils

The composition according to the invention can further comprise at least one non-volatile oil. The latter can in particular be selected from non-volatile hydrocarbon and/or silicone and/or fluorinated oils.

"Non-volatile oil" means an oil that remains on the skin or keratin fibres, and more generally on keratinous materials, at room temperature and atmospheric pressure, at least for several hours. A non-volatile oil can also be defined as having a rate of evaporation such that in the conditions defined previously, the amount evaporated after 30 minutes is less than 0.002 mg/cm²/min according to the protocol defined previously.

As non-volatile hydrocarbon oil, we may notably mention:

- hydrocarbon oils of vegetable origin such as the triglycerides constituted of esters of fatty acids and of glycerol, where the fatty acids can have chain lengths varying from C4 to C24, and the latter can be linear or branched, saturated or unsaturated, such as triglycerides of heptanoic, octanoic acids; these oils are notably wheat-germ oil, sunflower oil, grapeseed oil, sesame oil, maize oil, apricot oil, castor oil, karite oil, avocado oil, olive oil, soya oil, sweet almond oil, palm oil, colza oil, cotton oil, hazelnut oil, macadamia oil, jojoba oil, alfalfa oil, poppy oil, Chinese squash oil, sesame oil, squash oil, colza oil, blackcurrant oil, evening primrose oil, millet oil, barley oil, quinoa oil, rye oil, safflower oil, candlenut oil, passionflower oil, musk rose oil; or the triglycerides of caprylic/capric acids such as those sold by the company Stearineries Dubois or those sold under the designations "Miglyol 810®", "812®" and "818®" by the company Dynamit Nobel,

- oils of animal origin such as mink oil, turtle oil, perhydrosqualene,

- synthetic ethers;
- linear or branched hydrocarbons of mineral or synthetic origin such as paraffin oil or its derivatives, petroleum jelly, polydecenes, hydrogenated polyisobutene such as Parleam® marketed by the company NIPPON OIL FATS, squalane, and mixtures thereof;
- esters of fatty acid, in particular with 4 to 22 carbon atoms, and notably of octanoic acid, heptanoic acid, lanolin acid, oleic acid, lauric acid, stearic acid such as propylene glycol dioctanoate, propylene glycol monoisostearate, poly-glyceryl 2-diisostearate, neopentylglycol diheptanoate,
- synthetic esters such as the oils of formula R1COOR2 in which R1 represents the residue of a linear or branched fatty acid having from 1 to 40 carbon atoms and R2 represents a hydrocarbon chain, notably branched, containing from 1 to 40 carbon atoms provided that R1 + R2 is > 1.1, for example purcelline oil (cetostearyl octanoate), isononyl isononanoate, benzoate of C12 to C15 alcohol, ethyl-2-hexyl palmitate, octyl-2-dodecyl stearate, octyl-2-dodecyl erucate, isostearyl isostearate, octyl-2-dodecyl benzoate, octanoates, decanoates or ricinoleates of alcohols or polyalcohols, isopropyl myristate, isopropyl palmitate, butyl stearate, hexyl laurate, diisopropyl adipate, 2-ethyl-hexyl palmitate, 2-hexyl-decyl laurate, 2-octyl-decyl palmitate, 2-octydodecyl myristate, 2-diethyl-hexyl succinate, diisostearyl malate, isodecyl neopentanoate;
- hydroxylated esters such as isostearyl lactate, octyihydroxy stearate, octyldodecyl hydroxystearate, disoistearylmalate, triisocetyl citrate, glycerol or diglycerol triisostearate; diethylene glycol diisononanoate; and
- esters of pentaerythritol; esters of aromatic acids and of alcohols comprising 4 to 22 carbon atoms, notably tridecyl trimellitate,
- fatty alcohols that are liquid at room temperature with a branched and/or unsaturated carbon chain having from 8 to 26 carbon atoms such as oleic alcohol, linoleic or linolenic alcohol, isostearic alcohol or octyl dodecanol;
Cs-C26 higher fatty acids such as oleic acid, linoleic acid, linolenic acid, or isostearic acid;
- and mixtures thereof.

The non-volatile silicone oils usable in the composition according to the invention can be non-volatile polydimethylsiloxanes (PDMS), polydimethylsiloxanes having alkyl or alkoxy groups, pendant and/or at the end of the silicone chain, groups each having from 2 to 24 carbon atoms, phenylated silicones such as phenyl trimethbicones,
phenyl dimethicones, phenyl trimethylsiloxy diphenylsiloxanes, diphenyl dimethicones, diphenyl methylidiphenyl trisiloxanes or 2-phenylethyl trimethylsiloxysilicates.

In particular, the composition according to the invention can comprise, as non-volatile oil, at least one dry oil as defined below.

"Dry oil" means, in the sense of the present application, an oil selected from oils having a viscosity less than or equal to 0.01 Pa.s (10 Cps), notably in the range from 0.003 to 0.01 Pa.s, a surface tension between 21 and 31 mN/m and a rate of evaporation below 0.002 m.g/cm²/min measured according to the protocol described above.

The preferred dry oils are aprotic oils having from 12 to 22 carbon atoms, preferably from 14 to 22 carbon atoms, and more preferably from 16 to 20 carbon atoms.

Aprotic oil means an oil comprising few or no hydrogen atoms bound to a strongly electronegative atom such as O or N.

In particular, aprotic oil means oils that can comprise, depending on the yield in their synthesis, residual groups bearing a labile hydrogen atom (for example residual groups OH, NH, and/or COOH) at a content less than or equal to 5% by number.

Among the oils corresponding to this definition, we may mention:

- ester oils such as isopropyl myristate, isopropyl palmitate, ethyl-2-hexyl benzoate, isodecyl neopentanoate, ethyl-2-hexyl ethyl-2-hexanoate, isononyl isononanoate,
- ether oils such as dicaprylyl ether, dicaprylyl carbonate (Cetiol CC),
- carbonate oils such as diethyl-2-hexyl carbonate,
- polyalkylsiloxanes, in particular polydimethylsiloxanes (PDMS) for example PDMS 5 cSt and mixtures thereof.

The inventors found, surprisingly, that the combination of a particular mixture of alkanes and of a dry oil in a cosmetic and/or dermatological composition led to particularly advantageous properties, notably in terms of organoleptic sensations.

Consequently, the invention also relates, according to one of its aspects, to a cosmetic and/or dermatological composition comprising a mixture of alkanes as defined previously and at least one dry oil.

The invention also relates, according to another of its aspects, to a cosmetic and/or dermatological composition comprising at least:
- a mixture of alkanes comprising at least n-dodecane and n-tetradecane, in which n-dodecane and n-tetradecane represent at least 90 wt.% of said mixture and in which the content by weight of n-tetradecane is greater than or equal to 40 wt.% relative to the total weight of said mixture, and

- a dry oil.

According to this other aspect of the invention, the mixture of alkanes can also comprise at least 95 wt.%, in particular at least 97 wt.%, of n-dodecane and of n-tetradecane, relative to its total weight.

The content by weight of n-tetradecane in this mixture can be for example greater than or equal to 40 wt.%, for example between 40 and 98 wt.%, in particular greater than or equal to 42 wt.%, for example between 42 and 96 wt.%, for example greater than or equal to 44 wt.%, for example between 44 and 94 wt.%, for example greater than or equal to 46 wt.%, for example greater than or equal to 48 wt.%, for example greater than or equal to 50 wt.%, relative to the total weight of said mixture of alkanes.

As for the content by weight of n-dodecane in this mixture, it can be for example less than or equal to 60 wt.%, for example between 2 and 60 wt.%, for example less than or equal to 58 wt.%, for example between 4 and 58 wt.%, for example less than or equal to 56 wt.%, for example between 6 and 56 wt.%, for example less than or equal to 54 wt.%, for example less than or equal to 52 wt.%, for example less than or equal to 50 wt.%, relative to the total weight of said mixture of alkanes.

The [n-tetradecane/n-dodecane] weight ratio in this mixture can for example be from 0.65 to 9, for example from 0.7 to 4, for example from 0.8 to 3, for example from 0.9 to 2, for example from 0.92 to 1.80, preferably from 0.94 to 1.60, and in particular from 0.96 to 1.4, or can even be of the order of 1.

It can notably comprise a mixture of alkanes constituted of 50 wt.% of n-tetradecane and 50 wt.% of n-dodecane.

Still according to this aspect of the invention, relating to combination with a dry oil, and according to one embodiment, the content by weight of n-tetradecane can be for example greater than or equal to 52 wt.%, for example between 52 and 98 wt.%, in particular greater than or equal to 54 wt.%, for example between 54 and 96 wt.%, for example greater than or equal to 56 wt.%, for example between 56 and 94 wt.%, for
example greater than or equal to 6.0 wt.%, for example greater than or equal to 70 wt.%, for
example greater than or equal to 80 wt.%, for example greater than or equal to 90 wt.%,
relative to the total weight of the mixture of alkanes according to the invention.

Still according to these aspects, according to one embodiment, the content by
weight of n-dodecane can be for example less than or equal to 48 wt.%, for example
between 2 and 48 wt.%, for example less than or equal to 46 wt.%, for example between 4
and 46 wt.%, for example less than or equal to 44 wt.%, for example between 6 and
44 wt.%, for example less than or equal to 40 wt.%, for example less than or equal to
30 wt.%, for example less than or equal to 20 wt.%, for example less than or equal to
10 wt.%, relative to the total weight of the mixture of alkanes according to the invention.

The [n-tetradecane/n-dodecane] weight ratio can for example be from 1.01 to
9, for example from 1.01 to 4, for example from 1.01 to 3, for example from 1.01 to 2, for
example from 1.01 to 1.80, preferably from 1.02 to 1.60, and in particular from 1.05 to 1.4.

Solid fats

The composition according to the invention can comprise, in particular when it
is a lipstick, a mascara (in particular waterproof) or a foundation, at least one fat that is
solid at room temperature and at atmospheric pressure; it can be selected from waxes,
 pasty fats, gums and mixtures thereof.

Thus, the composition according to the invention can comprise at least one
fatty compound that is pasty at room temperature.

"Pasty fat" means, in the sense of the invention, fats having a melting point in
the range from 20 to 55°C, in particular 25 to 45°C and/or a viscosity at 40°C in the range
from 0.1 to 40 Pa.s (1 to 400 poise), in particular 0.5 to 25 Pa.s, measured with the
Contraves TV or Rheomat 80, equipped with a spindle rotating at 60 Hz. A person skilled
in the art can select the spindle for measuring the viscosity, from spindles MS-r3 and MS-
r4, on the basis of his general knowledge, so as to be able to perform measurements on the
pasty compound being tested.

More particularly, these fats can be hydrocarbon compounds, optionally of the
polymeric type; they can also be selected from silicone compounds; they can also be in the
form of a mixture of hydrocarbon and/or silicone compounds. In the case of a mixture of
different pasty fats, preferably pasty hydrocarbon compounds are used (containing mainly 
carbon and hydrogen atoms and optionally ester groups), as the main constituent.

"Wax" means, within the scope of the present invention, generally a lipophilic 
compound, solid at room temperature (25°C), deformable or non-deformable, with 
reversible solid/liquid change of state, having a melting point greater than or equal to 30°C, 
which can be up to 200°C and notably up to 120°C.

By bringing the wax to the liquid state (fusion), it is possible to make it 
miscible with oils and to form a microscopically homogeneous mixture, but when the 
temperature of the mixture is brought back to room temperature, we obtain 
recrystallization of the wax in the oils of the mixture.

In particular, waxes suitable for the invention can have a melting point greater 
than or equal to 45°C, and in particular greater than or equal to 55°C.

In the sense of the invention, the melting point corresponds to the temperature 
of the most endothermic peak observed in thermal analysis (DSC) as described in standard 
ISO 11357-3; 1999. The melting point of the wax can be measured using a differential 
scanning calorimeter (DSC), for example the calorimeter sold under the designation 
"MDSC 2920" by the company TA Instruments.

The measurement protocol is as follows:

A sample of 5 mg of wax placed in a crucible is submitted to a first 
temperature rise from -20°C to 100°C, at a heating rate of 10°C/minute, then it is cooled 
from 100°C to -20°C at a cooling rate of 10°C/minute and finally it is submitted to a 
second temperature rise from -20°C to 100°C at a heating rate of 5°C/minute. During the 
second temperature rise, the variation of the difference in power absorbed by the empty 
crucible and by the crucible containing the sample of wax is measured in function of 
temperature. The melting point of the compound is the temperature value corresponding to 
the top of the peak of the curve representing the variation of the difference in absorbed 
power in function of the temperature.

As waxes that can be used according to the invention, we may mention:

- waxes of animal origin such as beeswaxes, lanolin wax and lanolin derivatives,
- vegetable waxes such as carnauba wax, candelilla wax, ouricury wax, Japan wax, 
cocoa butter or cork-fibre or sugarcane waxes,
- mineral waxes, for example from paraffin, petroleum jelly, lignite or microcrystalline waxes or ozokerites,
- synthetic waxes, including polyethylene waxes, and waxes obtained by Fischer-Tropsch synthesis,
- silicone waxes, in particular substituted linear polysiloxanes; we may mention, for example, polyether silicone waxes, alkyl or alkoxy-dimethicones having from 16 to 45 carbon atoms, alkyl methicones such as the C30-C45 alkyl methicone sold under the trade name "AMS C 30" by DOW CORNING,
- hydrogenated oils that are solid at 25°C such as hydrogenated castor oil, hydrogenated jojoba oil, hydrogenated palm oil, hydrogenated tallow, hydrogenated coconut oil and fatty esters that are solid at 25°C such as the C20-C40 alkyl stearate sold under the trade name "KESTER WAX K82H" by the company KOSTER KEUNEN,
- and/or mixtures thereof.

Aqueous and/or water-soluble phase

The composition according to the invention can further comprise at least one aqueous phase containing water. The water can be a floral water such as cornflower water and/or a mineral water such as VITTEL water, LUCAS water or LA ROCHE POSAY water and/or a thermal water.

The aqueous phase can also comprise organic solvents that are miscible with water (at 25°C), for example primary alcohols such as ethanol and isopropanol, glycols such as glycerol, propylene glycol, butylene glycol, dipropylene glycol, diethylene glycol, glycol ethers, C₄ to C₄ alkyl ethers of mono-, di- or tripropylene glycol, mono-, di- or triethylene glycol, and mixtures thereof.

The composition can be an anhydrous composition, i.e. a composition containing less than 2 wt.% of water, or even less than 0.5% of water, notably water-free, the water not having been added during preparation of the composition but corresponding to the residual water supplied by the ingredients of the mixture.
**Particulate phase**

The composition of the invention can further comprise, especially when it is a lipstick, a foundation, or a mascara, an additional particulate phase.

It can notably comprise pigments and/or nacres and/or supplementary fillers used in cosmetic compositions.

Pigments are to be understood as white or coloured particles, mineral or organic, insoluble in the hydrophilic liquid phase as well as in the lipophilic phase, intended for colouring and/or opacifying the composition. Fillers are to be understood as colourless or white particles, mineral or synthetic, lamellar or non-lamellar. Nacres are to be understood as iridescent particles, notably produced in the shell of certain molluscs or else synthesized.

As mineral pigments usable in the invention, we may mention the oxides of titanium, of zirconium or of cerium as well as the oxides of zinc, of iron or of chromium, ferric blue, manganese violet, ultramarine and chromium hydroxide. Among the organic pigments usable in the invention, we may mention carbon black, pigments of the D & C type, and lakes based on carmine, barium, strontium, calcium, aluminium or diketopyrrolopyrrole (DPP) described in documents EP-A-542669, EP-A-787730, EP-A-787731 and WO-A-96/08537.

The nacreous pigments can be selected from white nacreous pigments such as mica covered with titanium, or with bismuth oxychloride, coloured nacreous pigments such as titanium mica with iron oxides, titanium mica notably with ferric blue or chromium oxide, titanium mica with an organic pigment of the aforementioned type as well as nacreous pigments based on bismuth oxychloride.

As for the supplementary fillers, these can notably be plate-like fillers for example talc, zinc stearate, mica, kaolin, or more or less regular spheroids such as powdered polyamide (Nylon®) (Orgasol® from Atochem), powdered polyethylene, powdered polytetrafluoroethylene (Teflon®), starch, boron nitride, polymer microspheres such as those of polyvinylidene chloride/acylonitrile such as Expancel® (Nobel Industrie), copolymers of acrylic acid (Polytrap® from the company Dow Corning), microbeads of silicone resin (Tospearls® from Toshiba, for example), and elastomeric organopolysiloxanes.
The composition can also comprise 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 beetroot juice and methylene blue.

**Additives**

The composition according to the invention can, moreover, comprise all the ingredients conventionally used in the areas in question and more especially in the cosmetic and dermatological fields. These ingredients can notably be selected from polymers, notably film-forming polymers, fixing polymers; surfactants; hair conditioners; opacifiers; perfumes; thickeners; gelling agents; hair dyes; silicone resins; silicone gums; preservatives; antioxidants, cosmetic active substances; sun filters; pH stabilizers; vitamins; hydrating agents; antiperspirants; deodorants; self-tanning compounds and mixtures thereof. The amounts of these various ingredients are those used conventionally in the areas in question and are for example from 0.01 to 20% of the total weight of the composition.

Of course, a person skilled in the art will take care to select any additional compound(s), and/or their amount, in such a way that the advantageous properties of the composition according to the invention are not, or substantially not, altered by the addition considered.

The composition of the invention can be obtained according to methods of preparation used conventionally in cosmetics or in dermatology.

According to one embodiment, the cosmetic and/or dermatological compositions according to the invention can comprise from 0.1 to 99 wt.%, for example from 2 to 98 wt.% of the mixture of alkanes according to the invention relative to their total weight.

The mixture of alkanes according to the invention advantageously makes it possible to preserve all of the cosmetic properties of the composition in which it is formulated, and in particular its properties of durability, non-migration, non-transfer, piay-time, smooth application (or good spreading), comfort, gloss or covering power. One and the same composition need not necessarily have all of these properties, but in most cases it is desirable for the composition to possess at least some of them.
The durability of the composition can in particular be the durability in water or resistance to rubbing with the fingers or resistance to tears, to sweat or to sebum.

The property of non-migration corresponds, for a composition, to not migrating into the folds of the skin such as wrinkles or lines around the lips and eyes (notably eyelids).

The non-transfer property of a composition corresponds to the fact that once applied, it is not deposited to any notable extent on surfaces with which they come in contact (glass, cup, cigarette, clothing for example).

The "play-time" of a product corresponds to the time during which the consumer can work it during its application and therefore reflects the ease of application of the product or its manageable.

It can notably be a make-up composition, a care composition, a perfume composition or a composition for the hair, for example as defined below.

It can notably be a composition for the hair and notably a composition for cleaning or care of the hair such as a shampoo, a conditioner to be rinsed or not, a composition to be rinsed that is to be applied before or after colouring, bleaching, perming or straightening or between two stages of perming or straightening, a composition for the hair for maintaining the hairstyle such as a styling lacquer, gel, mousse or spray, or a composition for the hair such as a composition for colouring the hair or a composition for permanent waving of the hair; a make-up composition, and notably a make-up composition for the lips, body, face or appendages such as a foundation, a lipstick, a lip-gloss, a face powder or eye-shadow, a nail varnish, a mascara or an eye-liner; a care composition, and notably a composition for care of the body or the face, or a composition for make-up removal and/or for cleaning keratinous materials, notably of the skin, of the mucosae such as the lips and/or eyelashes, such as a shower gel, a bath gel or a make-up remover; a perfume composition.

In the compositions according to the invention, the relative proportions of n-dodecane and n-tetradecane can be adjusted according to the required properties, notably in terms of rates of evaporation.

Adjustment of the rate of evaporation (which can be evaluated according to the protocol described previously) is within the competence of a person skilled in the art.
**Make-up compositions**

According to one embodiment, the composition according to the invention can be a make-up composition.

When the make-up composition is a lipstick, it can notably comprise from 0.5 to 20 wt.% of pigments and/or nacres and/or supplementary fillers, from 0.5 to 40 wt.% of solid fat.

When the make-up composition is a foundation, it can notably comprise from 0.5 to 60 wt.% of pigments and/or nacres and/or supplementary fillers, from 0.5 to 20 wt.% of solid fat.

In particular, when it is a solid foundation, the composition can notably comprise from 0.5 to 90 wt.% of organic or mineral solids including optionally from 0.5 to 40% of solid fat.

Conversely, when it is a liquid foundation, in particular in the form of a direct or inverted emulsion, the composition can notably comprise from 0.5 to 90 wt.%, of liquid fatty phase or from 0.5 to 90% of aqueous phase depending on the form of emulsion, as well as from 0.5 to 60% of solid phase in the form of pigments or fillers.

In the case of a mascara, the composition can contain from 0.5 to 70% of mineral or organic solids, in particular from 0.5 to 40% of solid fat.

**Care compositions**

According to another embodiment, the composition according to the invention can be a care composition, and notably a composition for make-up removal.

It can notably be a composition that is in the form of an emulsion, for example an O/W, W/O, O/W/O or W/O/W emulsion.

When the composition is intended for make-up removal, it can be advantageous for it to contain, as well as the mixture of alkanes according to the invention, one or more additional hydrocarbon oils of mineral or synthetic origin. As linear or branched hydrocarbon oils, of mineral or synthetic origin, we may mention for example volatile or non-volatile paraffin oils and their derivatives, petroleum jelly, liquid petroleum jelly (mineral oil), perhydrosqualene, polydecenes, isohexadecane, isododecane, hydrogenated polyisobutene (or hydrogenated isoparaffin) such as Parleam oil.
Among conventional additives that can be contained in the aqueous phase and/or in the oily phase of care compositions according to the invention (depending on the water-soluble or fat-soluble character of these additives), we may mention notably anionic foaming surfactants such as sodium lauryl ether sulphate, sodium alkyl phosphate, sodium trideceth sulphate; amphoteric foaming surfactants such as alkyl betaines such as cocobetaine, laurylbetaine and disodium cocoamphodiacetate, and nonionic foaming surfactants such as alkylpolyglucosides (APG); preservatives; sequestering agents (EDTA); antioxidants; perfumes; colorants such as soluble dyes, pigments and nacres; dulling fillers, lifting agents, bleaching agents or exfoliating agents; sun filters; cosmetic or dermatological active substances and agents having the effect of improving the hydrophilic or lipophilic cosmetic properties of skin; electrolytes; anionic, nonionic, cationic or amphoteric hydrophilic or lipophilic polymers; thickeners or dispersants. The amounts of these various additives are those used conventionally in the field in question, and for example from 0.01 to 20% of the total weight of the composition.

As active substances usable in care compositions according to the invention, we may mention, for example, water-soluble or fat-soluble vitamins such as vitamin A (retinol), vitamin E (tocopherol), vitamin C (ascorbic acid), vitamin B5 (panthenol), vitamin B3 (niacinamide), derivatives of these vitamins (notably esters) and mixtures thereof; antiseptics; anti-bacterial active substances such as 2,4,4'-trichloro-2'-hydroxy diphenyl ether (or triclosan), 3,4,4'-trichlorocarbanilide (or triclocarban); antiseborrhoeic agents such as salicylic acid; antimicrobials and antibacterials such as benzoyl peroxide, salicylic acid, triclosan, azelaic acid, niacin (vit. PP); enzymes, yeasts, plant extracts such as tea, mint and water lily extracts, and any active substance suitable for the final purpose of the composition, and mixtures thereof.

Perfume compositions

According to another embodiment, the composition according to the invention can be a perfume composition.

It can notably be a composition comprising at least one volatile alcohol.

"Volatile alcohol" means any compound comprising at least one alcohol function having a vapour pressure at 20°C greater than 17.5 mm of mercury.
The volatile alcohols according to the present invention are preferably selected from C1-C5 lower monohydric alcohols and can be selected from methanol, ethanol, propanol, isopropanol, n-butanol, isobutanol, t-butanol and more particularly ethanol.

The volatile alcohol or alcohols are preferably present in amounts in the range from 5 to 80%.

It can notably be a perfume composition comprising for example at least one perfume substance.

"Perfume substance" means any perfume or aroma that can release a pleasant odour.

Preferably, the amount of perfume substance(s) varies from 1 to 30 wt.%, more preferably from 2 to 25 wt.% relative to the total weight of the composition.

Perfumes and aromas of natural or synthetic origin and mixtures thereof can be used as perfume substance in the composition of the invention.

As perfume substances of natural origin, we may mention for example extracts from flowers (lily, lavender, rose, jasmine, ylang-ylang), from stems and leaves (patchouli, geranium, petitgrain), from fruits (coriander, anise, cumin, juniper), from fruit peel (bergamot, lemon, orange), from roots (angelica, celery, cardamom, iris, sweet rush), from wood (pine, sandalwood, guaiacum, pink cedar), from herbs and grasses (tarragon, lemon grass, sage, thyme), from needles and branches (spruce, fir, pine, dwarf pine), from resins and balsams (galbanum, elemi, benzoin, myrrh, olibanum, opopanax).

As perfume substance of synthetic origin, we may mention for example compounds of the ester, ether, aldehyde, ketone, aromatic alcohol and hydrocarbon type.

The odoriferous substances contained in the perfume composition according to the invention are compounds usually employed by perfumers and they are notably described in S. Arctander, Perfume and Flavor Chemicals (Montclair, N.J., 1969), in S. Arctander, Perfume and Flavor Materials of Natural Origin (Elizabeth, N.J., 1960) and in "Flavor and Fragrance Materials - 1991", Allure Publishing Co. Wheaton, 111., USA.

They may be natural products (essential, absolute, resinoid, resinous, solid oils) and/or synthetic products (hydrocarbons, alcohols, aldehydes, ketones, ethers, acids, esters, acetals, ketals, nitriles, saturated or unsaturated, aliphatic or cyclic).
Examples of essential oils include the essential oils of lemon, orange, anise, bergamot, rose, geranium, ginger, neroli, basil, rosemary, cardamom, camphor, cedar, camomile, sandalwood, sage, and mixtures thereof, but this is not an exhaustive list.

Examples of other odoriferous compounds are notably: geraniol, geranyl acetate, farnesol, borneol, bornyl acetate, linalol, linalyl acetate, linalyl propionate, linalyl butyrate, tetrahydrolinalol, citronellol, citronellyl acetate, citronellyl formate, citronellyl propionate, dihydromyrcenol, dihydromyrcenyl acetate, tetrahydromyrcenol, terpineol, terpinyl acetate, nopol, nopyl acetate, nerol, neryl acetate, 2-phenylethanol, 2-phenylethyl acetate, benzyl alcohol, benzyl acetate, benzyl salicylate, styrrallyl acetate, benzyl benzoate, amyl salicylate, dimethylbenzyl-carbinol, trichloromethylphenylcarbinyl acetate, p-tert-butylocyclohexyl acetate, isononyl acetate, vetiverol, alphahexylcinnamaldehyde, 2-methyl-3-(p-tert-butylphenyl)propanal, 2-methyl-3-(p-isopropylphenyl)propanal, 3-(p-tert-butylphenyl)propanal, 2,4-dimethylcyclohex-3-enyl carboxaldehyde, tricyclodecenyl acetate, tricyclodecenyl propionate, 4-(4-hydroxy-4-methylpentyl)-3-cyclohexene-carboxaldehyde, 4-(4-methy-1-3-penteny l)-3-cyclohexene-carboxaldehyde, 4-acetoxy-3-pentyl-tetraydropyrany, 3-carboxymethyl-2-pentyl cyclopentane, 2-nheptylcyclopentanone, 3-methyl-2-pentyl-2-cyclopentenone, menthone, carvone, tagetone, geranylacetone, n-decanal, n-dodecanal, 9-decenol-1, phenoxyethyl isobutyrate, phenylacetaldehyde dimethyl acetal, phenylacetaldehyde diethyl acetal, geraninitrile, citronellonitrile, cedryl acetate, 3-isocamphylcyclohexanol, cedryl methyl ether, isolongifolanone, aubepinonitrile, aubepine, heliotropin, coumarin, eugenol, vanilla, diphenyl oxide, citral, citronellall, hydroxycitronellall, damascone, ionones, methylionones, isomethylionones, solanone, iron.es, cis-3-hexenol and its esters, indane musk compounds, tetralin musk compounds, isochroman musk compounds, macrocyclic ketones, macrolactone musk compounds, ethylene brassylate and mixtures thereof.

The perfume composition according to the invention can further comprise any additive usually employed in the field of perfumes, notably selected from cosmetic or dermatological active substances, emollients such as sweet almond oil and apricot kernel oil, hydrating agents such as glycerol, soothing agents such as α-bisabolol, allantoin, aloe vera; vitamins, essential fatty acids, insect repellents, propellants, fillers, nacres, glitter, soluble dyes in the carrier of the composition, colour stabilizers of the perfume and
mixtures thereof. When they are present in the composition of the invention, these additives can be present in an amount in the range from 0.001 to 10 wt.% and preferably from 0.01 to 5 wt.% relative to the total weight of the composition.

The perfume composition can additionally contain from 0.5 to 30% of water relative to its total weight.

Compositions for the hair

According to another embodiment, the composition according to the invention can be a composition for the hair.

The compositions for the hair according to the invention can contain one or more cationic polymers with cationic charge density greater than 4 miliequivalents per gram (meq/g), preferably greater than or equal to 5 miliequivalents per gram (meq/g), preferably in the range from 5 to 20 meq/g and more particularly from 5.5 to 10 meq/g.

The cationic charge density of a polymer corresponds to the number of moles of cationic charges per unit mass of polymer in conditions in which the latter is fully ionized. It can be determined by calculation if the structure of the polymer is known, i.e. the structure of the monomers of which the polymer is constituted and their molar proportion or proportion by weight. It can also be determined experimentally by Kjeldahl's method, generally at a pH of about 7 at room temperature.

Cationic polymers having a cationic charge density greater than 4 meq/g, usable according to the present invention, can be selected from all those already known per se to improve the cosmetic properties of hair treated with compositions, i.e. notably those described in patent application EP-A-0 337 354 and in French patent applications FR-A-2 270 846, 2 383 660, 2 598 611, 2 470 596 and 2 519 863.

The cationic polymers are selected from those that comprise units having primary, secondary, tertiary and/or quaternary amine groups, which can either form part of the main chain of the polymer, or can be borne by a side substituent joined directly to the latter.

The cationic polymers that are used generally have a number-average molecular weight between about 500 and 5.10^6, and preferably between about 10^3 and 3.10^6.
Among the cationic polymers, we may mention more particularly polymers of the polyamine, polyaminoamide and quaternary polyammonium type. These are known products.

Among these polymers, we may mention:

5 (1) homopolymers or copolymers derived from acrylic or methaerylic esters or amides and having at least one of the units with the following formulae:

\[
\begin{align*}
\text{R}_3 & \quad -\text{CH}_2\text{C} & \quad -\text{CH}_2\text{C} \\
& \quad \text{O=O} & \quad \text{O=O} \\
& \quad \text{O} & \quad \text{O} \\
& \quad \text{A} & \quad \text{A} \\
& \quad \text{N} & \quad \text{N} \\
& \quad \text{R}_2 & \quad \text{R}_1 \\
\end{align*}
\]

\[
\begin{align*}
\text{R}_4 & \quad \text{N} & \quad \text{R}_6 \\
& \quad \text{X} & \quad \text{X} \\
\end{align*}
\]

in which:

R3, which may be identical or different, denotes a hydrogen atom or a CH3 radical;

A, which may be identical or different, represents a linear or branched alkyl group with 1 to 6 carbon atoms, preferably 2 or 3 carbon atoms or a hydroxyalkyl group with 1 to 4 carbon atoms;

R4, R5, R6, which may be identical or different, represent an alkyl group having from 1 to 18 carbon atoms or a benzyl radical and preferably an alkyl group having from 1 to 6 carbon atoms;
R₁ and R₂, which may be identical or different, represent hydrogen or an alkyl group having from 1 to 6 carbon atoms and preferably methyl or ethyl; X denotes an anion derived from a mineral or organic acid such as a methosulphate anion or a halide such as chloride or bromide.

(2) Cationic polysaccharides notably celluloses and cationic galactomannan gums. Among the cationic polysaccharides, we may mention more particularly the derivatives of cellulose ethers having quaternary ammonium groups, cationic cellulose copolymers or cellulose derivatives grafted with a water-soluble monomer of quaternary ammonium and cationic galactomannan gums.

(3) Polymers constituted of piperazinyl units and linear or branched alkylene or hydroxyalkylene divalent radicals, optionally interrupted by oxygen, sulphur, or nitrogen atoms or by aromatic or heterocyclic rings, as well as the products of oxidation and/or quaternization of these polymers;

(4) Water-soluble polyaminoamides prepared in particular by polycondensation of an acid compound with a polyamine,

(5) Derivatives of polyaminoamides resulting from the condensation of polyalkylene polyamides with polycarboxylic acids followed by alkylation by bifunctional agents,

(6) Polymers obtained by reaction of a polyalkylene polyamine having two primary amine groups and at least one secondary amine group with a dicarboxylic acid selected from diglycolic acid and saturated aliphatic dicarboxylic acids having from 3 to 8 carbon atoms.

(7) Alkyl diallyl amine or dialkyl diallyl ammonium cyclopolymer,

(8) Quaternary diammmonium polymers,

(9) Quaternary polyammonium polymers comprising units of formula (7):

\[
\begin{align*}
R_{18}^\text{N}^+ - (\text{CH}_2)_r - \text{NH} - \text{CO} - (\text{CH}_2)_q - \text{CO} - \text{NH} - (\text{CH}_2)_s - \text{N}^+ - X^- \\
R_{19}^\text{X} &
\end{align*}
\]

in which:
R₁g, R₁9, R₂0 and R₂₁, which may be identical or different, represent a hydrogen atom or a methyl, ethyl, propyl, β-hydroxyethyl, β-hydroxypropyl or -CH₂CH₂(OCH₂CH₂)pOH radical,

where p is equal to 0 or an integer between 1 and 6, provided that R₁g, R₁9, R₂0 and R₂₁ do not simultaneously represent a hydrogen atom,

r and s, which may be identical or different, are integers between 1 and 6,

q is equal to 0 or an integer between 1 and 34,

X⁻ denotes an anion such as a halide,

A denotes a radical of a dihalide or preferably represents -CH₂-CH₂-O-CH₂-CH₂-.

(10) Quaternary copolymers of vinyilactam (vinylpyrrolidone and/or vinylcaprolactam) and of vinylimidazole.

(11) Crosslinked polymers of methacryloyloxyalkyl(Ci-C.4) trialkyl[C]-C4 ammonium salts.

Other cationic polymers usable within the scope of the invention are cationic proteins or hydrolysates of cationic proteins, polyalkyleneimines, in particular polyethyleneimines, polymers containing vinylpyridine or vinylpyridinium units, condensates of polyamines and epichlorohydrin, quaternary polyureynes and chitin derivatives.

The compositions for the hair according to the invention can also contain one or more organomodified or non-organomodified silicones.

The silicones usable according to the invention can be soluble or insoluble in the composition, and in particular they can be polyorganosiloxanes that are insoluble in the composition of the invention; they can be in the form of oils, waxes, resins or gums.

The organopolysiloxanes are defined in more detail in the work of Walter NOLL "Chemistry and Technology of Silicones" (1968) Academic Press. They can be volatile or non-volatile.

The compositions for the hair according to the invention can also contain cosmetically acceptable additives, for example surfactants, thickeners, penetrating agents, perfumes, buffers, and various usual additives such as UV filters, waxes, cyclic or linear or
branched volatile or non-volatile silicones, organomodified (notably with amine groups) or not organomodified, preservatives, ceramides, pseudoceramides, vegetable, mineral or synthetic oils, vitamins or provitamins such as panthenol, opacifiers, reducing agents, emulsifiers, preservatives, fillers, sun filters, proteins, hydrating agents, emollients, softening agents, anti-foaming agents, antiperspirants, anti-free-radical agents, fixing or non-fixing polymers, bactericides, sequestering agents, anti-dandruff agents, antioxidants, alkalinizing agents, and any other additive used conventionally in cosmetic compositions intended to be applied on the hair.

The examples given below are for the purpose of providing non-limiting illustrations of the object of the present invention.

The amounts are given as percentages by weight.

**EXAMPLES**

In the examples of the composition given in detail below, the mixture of alkanes according to the invention was obtained from n-dodecane sold under the reference PARAFOL 12-97 by the company SASOL or under the references Vegelight 12 or Vegelight 12-99 by the company Biosyntis and from n-tetradecane sold under the reference PARAFOL 14-97 by the company SASOL or under the reference Vegelight 14 by the company Biosynthis.

These mixtures have a boiling point above 216°C at atmospheric pressure and a saturated vapour pressure below 0.1 mmHg at 20°C.

Therefore, advantageously, they comply with current legislation concerning VOCs.

**Example 1**

The following two-phase make-up removal composition was prepared:

- Water 52
- Sodium chloride 0.27
- Decyl glucoside 0.06
- Ethylenediamine tetraacetic acid (EDTA) 0.10
- Hexylene glycol 0.27
Example 2
The following foundation was prepared:
- Mixture of alkanes comprising 30 wt.% of n-dodecane and 70 wt.% of n-tetradecane
- Cyclopentasiloxane
- Isohexadecane
- Cycloentasiloxane
- Magnesium sulphate
- Alcohol
- Polyglyceryl-1-4-isostearate
- PEG 10 dimethicone
- Disodium stearoyl glutamate
- Distearoyl ammonium hectorite
- Water

Example 3
The following hair serum was prepared:
- Silicone gum
- Perfume
- Potassium phosphate
- Isohexadecane
- Cyclopentasiloxane
- Mixture of alkanes comprising 30 wt.% of n-dodecane and 70 wt.% of n-tetradecane

Example 3
The following hair serum was prepared:
- Silicone gum
- Perfume
- Mixture of alkanes comprising 48 wt.% of n-dodecane and 52 wt.% of n-tetradecane

**Example 4**

The following perfume composition was prepared:

- Odoriferous substance 12
- Mixture of alkanes comprising 30 wt.% of n-dodecane and 70 wt.% of n-tetradecane 22
- Denatured alcohol 66

**Example 5**

The following foundation was prepared:

- Mixture of alkanes comprising 60 wt.% of n-dodecane and 40 wt.% of n-tetradecane 9
- Polydimethylsiloxane (PDMS) 5 cSt 24.25
- Distearoyl ammonium hectorite 0.75
- Water 34.5
- Magnesium sulphate 0.70
- Alcohol 5
- Polyglyceryl-4-isostearate 0.90
- PEG 10 dimethicone 2.80
- Disodium stearoyl glutamate 0.25
- PEG 20 2
- Cetyl PEG/PPG 10/dimethicone 2.70
- Black iron oxide 0.60
- Brown iron oxide 1.55
- Yellow iron oxide 3.85
- Titanium dioxide 4
- Nylon 7
- Expancel 0.15

The compositions of examples 1 to 5 all display very good cosmetic properties.
CLAIMS

1. Mixture of alkanes comprising at least n-dodecane and n-tetradecane, characterized in that n-dodecane and n-tetradecane represent at least 90 wt.% of said mixture and in that the content by weight of n-tetradecane in said mixture is strictly above 50 wt.%, relative to the total weight of said mixture.

2. Mixture of alkanes according to Claim 1, comprising at least 95 wt.%, in particular at least 97 wt.%, relative to its total weight, of n-dodecane and of n-tetradecane.

3. Mixture of alkanes according to any one of the preceding claims, in which the content by weight of n-tetradecane is greater than or equal to 52 wt.%, for example between 52 and 98 wt.%, in particular greater than or equal to 54 wt.%, for example between 54 and 96 wt.%, for example greater than or equal to 56 wt.%, for example between 56 and 94 wt.%, for example greater than or equal to 60 wt.%, for example greater than or equal to 70 wt.%, for example greater than or equal to 80 wt.%, for example greater than or equal to 90 wt.% relative to the total weight of said mixture.

4. Mixture of alkanes according to any one of the preceding claims, in which the content by weight of n-dodecane is less than or equal to 48 wt.%, for example between 2 and 48 wt.%, for example less than or equal to 46 wt.%, for example between 4 and 46 wt.%, for example less than or equal to 44 wt.%, for example between 6 and 44 wt.%, for example less than or equal to 40 wt.%, for example less than or equal to 30 wt.%, for example less than or equal to 20 wt.%, for example less than or equal to 10 wt.%, relative to the total weight of said mixture.

5. Mixture of alkanes according to any one of the preceding claims, in which the [n-tetradecane/n-dodecane] weight ratio is from 1.01 to 9, for example from 1.01 to 4, for example from 1.01 to 3, for example from 1.01 to 2, for example from 1.01 to 1.80, preferably from 1.02 to 1.60, and in particular from 1.05 to 1.4.

6. Cosmetic and/or dermaological composition comprising at least one mixture of alkanes as defined according to any one of Claims 1 to 5.

7. Composition according to Claim 6, further comprising at least one oil having a viscosity less than or equal to 0.01 Pa.s, a surface tension between 21 and 31 mN/m and a rate of evaporation below 0.002 mg/cm²/min.

8. Cosmetic and/or dermaological composition comprising at least:
- a mixture of alkanes comprising at least n-dodecane and n-tetradecane, in which n-dodecane and n-teiradecane represent at least 90 wt.% of said mixture and in which the content by weight of n-tetradecane is greater than or equal to 40 wt.% relative to the total weight of said mixture, and

- an oil having a viscosity less than or equal to 0.01 Pa.s., a surface tension between 2.1 and 3.1 mN/m and a rate of evaporation below 0.002 mg/cm²/min.

9. Composition according to any one of Claims 6 to 8, characterized in that it is a composition for the hair and notably a composition for cleaning or for care of the hair such as a shampoo, a conditioner to be rinsed or not, a composition to be rinsed that is to be applied before or after colouring, bleaching, perming or straightening or between two stages of perming or straightening, a composition for the hair for maintaining the hairstyle such as a styling lacquer, gel, mousse or spray, or a composition for the hair such as a composition for colouring the hair or a composition for permanent waving of the hair.

10. Composition according to any one of Claims 6 to 8, characterized in that it is a make-up composition, and notably a make-up composition for the lips, body, face or appendages such as a foundation, a lipstick, a lip-gloss, a face powder or eye-shadow, a nail varnish, a mascara or an eye-liner.

11. Composition according to any one of Claims 6 to 8, characterized in that it is a care composition, and notably a composition for care of the body or the face, or a composition for make-up removal and/or for cleaning keratinous materials, notably of the skin, of the mucosae such as lips and/or eyelashes, such as a shower gel, a bath gel or a make-up remover, and preferably a composition for make-up removal.

12. Composition according to any one of Claims 6 to 8, characterized in that it is a perfume composition.

13. Use of a mixture of alkanes as defined according to any one of Claims 1 to 5 as a solvent in a cosmetic and/or dermatological composition, and notably in a composition as defined according to any one of Claims 6, 7 and 9 to 12.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61K8/31 A61Q1/02 A61Q1/14 A61Q5/12 A61Q13/00
ADD.

According to International Patent Classification (IPC) and/or both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A61K A61Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
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<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
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Further documents are listed in the continuation of Box C. * See patent family annex.

* Special categories of cited documents:
  * A* document defining the general state of the art which is not considered to be of particular relevance
  * E* earlier document but published on or after the international filing date
  * L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
  * O* document referring to an oral disclosure, use, exhibition or other means
  * P* document published prior to the international filing date but later than the priority date claimed
  * T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
  * X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
  * Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
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