



(51) International Patent Classification:

A45D 40/24 (2006.01) A45D 40/28 (2006.01)
A45D 40/26 (2006.01)

(21) International Application Number:

PCT/IB2009/055795

(22) International Filing Date:

16 December 2009 (16.12.2009)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

08/58756 18 December 2008 (18.12.2008) FR
61/193,919 8 January 2009 (08.01.2009) US

(71) Applicant (for all designated States except US): **L'OREAL** [FR/FR]; 14 rue Royale, F-75008 Paris (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BLIN, Xavier** [FR/FR]; 24 rue de Staël, F-75015 Paris (FR). **ARNAUD, Pascal** [FR/FR]; 18 rue de la Bergère, F-94240 L'Hay Les Roses (FR).

(74) Agent: **TANTY, François**; Nony, 3 rue de Penthievre, F-75008 Paris (FR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: A METHOD OF APPLYING MAKEUP AND A DEVICE FOR IMPLEMENTING SUCH A METHOD AND INCLUDING A VIBRATOR APPLICATOR

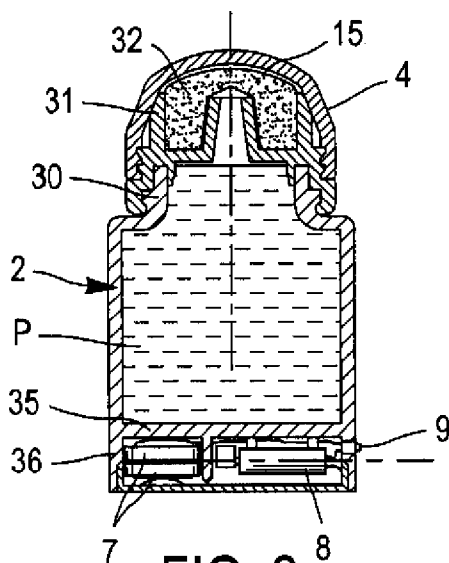


FIG. 2

(57) Abstract: A cosmetic treatment method for treating human keratinous material, in particular the skin, the lips, or keratinous fibers, the method comprising: • taking or dispensing, from a packaging device, at least two compounds that are initially separate within the packaging device; and • bringing the compounds into contact with keratinous material and subjecting the compounds to vibration from a vibrating application surface while they are being mixed together.

A METHOD OF APPLYING MAKEUP AND A DEVICE FOR IMPLEMENTING
SUCH A METHOD AND INCLUDING A VIBRATOR APPLICATOR

The present invention relates to methods of applying
makeup and/or a skincare, and to applicators used for
5 applying a cosmetic composition, including a skincare
composition, to keratinous fibers (e.g. eyelashes, hair),
the skin, mucous membranes, or the nails.

Several prior-art documents describe compositions
having color that appears or that is modified when they
10 are applied. Mention may be made of US patent
No. 4 756 906 and more recently US patent applications
Nos. 2007/0048238, 2007/0020209, 2006/0093564,
2006/0292193, and 2006/0057084, for example.

Such color transformation enables the consumer to
15 modulate the color of makeup, e.g. to adjust the color of
a foundation relative to the consumer's own skin tone, or
to obtain a healthy-complexion effect from a skincare.
It may also be appreciated by the consumer merely because
it is fun to do.

20 In order to obtain such a color effect, encapsulated
pigments are usually used, which pigments present the
characteristic of disintegrating or of fragmenting when
they are subjected to friction during application of the
composition.

25 However, applying the composition by using the
fingers or by using an applicator such as a sponge or a
brush, does not always enable the color effect to be
obtained optimally: color may be observed to develop in
non-uniform and incomplete manner, which minimizes its
30 interest.

Patent FR 1 223 254 describes a method of
distributing makeup compositions on the skin by means of
a vibrating applicator.

Applications FR 2 882 506 and WO 2006/090343
35 describe different types of vibrator applicator for
applying makeup compositions.

Application EP 1 842 520 describes a vibrator applicator that includes a damper that attenuates the transmission of vibration to the user's hand.

Application FR 2 882 506 describes a method of
5 applying makeup by means of a vibrating applicator.

FR 1 223 254 describes a method and an appliance for applying makeup.

Application FR 2 904 923 describes a vibrator device and a method of applying makeup using such a device, the
10 device including fastener means for removably fastening to a finger.

Application EP 1 867 248 discloses a packaging and applicator device that includes at least two reservoirs containing different compositions for mixing while the
15 device is being used.

The present invention seeks to improve still further methods of applying makeup and other cosmetic treatments, and devices for implementing them.

Exemplary embodiments of the invention provide a
20 cosmetic treatment method for treating human keratinous material, in particular the skin, the lips, or keratinous fibers, the method comprising the step consisting in:

- taking or dispensing, from a packaging device, at least two compounds that are initially separate within
25 the packaging device; and

- bringing the compounds into contact with keratinous material and subjecting the compounds to vibration from a vibrating application surface while they are being mixed together.

30 In unexpected manner, the use of a vibrating application surface makes it possible to obtain better mixing, e.g. a color effect that is more important and especially more uniform during application, in particular when at least one of the compounds is colored.

35 The use of a vibrating application surface further makes it possible to obtain better mixing of the two compositions, in particular when they are in distinct

forms, e.g. such as a composition in the form of a powder, and a composition in the form of a liquid (fluid), at least one of said compositions being colored.

Without wishing to be tied to any particular theory,
5 it seems that the presence of vibration modifies the movements of the user, who uses the applicator differently from a conventional applicator, tending to press harder on the applicator during application in order to feel the vibration. As a result, the compounds
10 are dispersed better. The same may apply when the application surface is defined by a finger or a hand (e.g. a glove), and when said finger or hand is subjected to vibration.

In addition, applying vibration in particular to the
15 skin further makes it possible to massage the epidermis with a view to obtaining a sensation of well-being in the application zone. Applying said vibration may further induce a biological response in the cells of the epidermis and/or of the dermis by stimulating
20 mechanoreceptors (e.g. integrins), thereby making it possible to improve the thickness of the skin and/or to improve the radiance of the complexion and/or to improve the mechanical properties of the skin (firmness, elasticity, tonicity).

25 In exemplary implementations of the invention, one of the compounds is contained in microcapsules that are in contact with the other compound, and the microcapsules are broken during application. The shells of the microcapsules initially keep the compounds separate. The
30 other compound is contained in the medium of the composition conveying the microcapsules, and may be constituted by any one of the ingredients of said medium. In particular, said compound contained in the microcapsules may be a pigment.

35 In other exemplary implementations of the invention, the two compounds are contained in distinct reservoirs within the packaging device. By way of example, one of

the compounds is a coloring agent contained in one of the reservoirs, and the other compound is any ingredient of the medium contained in the other reservoir.

Where appropriate, the method includes the step
5 consisting in varying the proportion of one of the compounds in the mixture, e.g. acting on an adjuster system of the packaging.

The mixture obtained on application, after rupturing microcapsules, or by mixing together two compositions,
10 may constitute a colored makeup and/or skincare composition, e.g. a fluid foundation; dark-circle or contour concealer composition for the eyes; a lipstick; a liquid lipgloss; a blusher; an eyeliner; a mascara; an eyeshadow; a makeup for the body or the hair; or even a
15 composition for coloring the skin. In particular, it is a makeup composition for the skin, and in particular a foundation.

Other exemplary embodiments of the invention also provide a packaging and applicator device comprising:

- 20 • two cosmetic compounds contained in the device out of contact with each other by means of at least one of the compounds being encapsulated and/or both compounds being stored separately in distinct reservoirs of the device;
- 25 • an applicator; and
- a vibration source for generating vibration in the applicator during application of the compounds to human keratinous material, with the applicator.

The term "during application" should be understood
30 to mean the moment when the compounds come into contact with the region being treated and/or after said moment, e.g. while the applicator is being used to spread the compounds over the region being treated.

In the presence of an encapsulated compound, said
35 compound may be contained in microcapsules. In particular exemplary embodiments, the micro-encapsulated compound is contained in hot-melt microcapsules. The

micro-encapsulated compound may be contained in microcapsules based on an acrylic polymer or on polysaccharides or on cellulose derivatives. By way of example, the size of the microcapsules lies in the range
5 20 micrometers (μm) to 3000 μm .

The two compounds may also be contained in distinct reservoirs. The device may include an adjuster system making it possible to vary the concentration of one of the compounds in the mixture. The compounds may be
10 dispensed separately until they reach the application surface.

In embodiments of the invention, at least one of said compounds is colored.

The vibration source may be mounted on an applicator
15 element that is in contact with the composition, which applicator element is constituted by an appropriate material, e.g. a foam made of synthetic material.

In advantageous manner, the applicator includes an internal supply of composition that is delivered during
20 application, e.g. a composition including an encapsulated pigment, but it is also possible to use the applicator to take the composition from a supply external thereto.

Examples of such applicators are described in patent applications FR 2 882 506 and EP 1 842 520.

25 The applicator may present a grip surface that is closer to the vibration source than is the application surface.

The invention can be better understood on reading the following detailed description of non-limiting
30 embodiments thereof, and on examining the accompanying drawings, in which:

• Figure 1 is a diagrammatic and fragmentary longitudinal section view of an example of a packaging and applicator device made in accordance with the
35 invention;

- Figures 2 to 8 are fragmentary longitudinal section views in elevation showing variants of devices made in accordance with the invention;

- Figure 9 is a plan view as seen looking along
5 arrow IX in Figure 8; and

- Figures 10 and 11 show variants of devices according to exemplary embodiments of the invention;

Vibration source

10 In accordance with the invention, the application surface is subjected to vibration, which vibration comes from a vibration source.

In the invention, a suitable vibration source produces vibration that can be obtained in various ways.

15 Each of the packaging and applicator devices shown in Figures 1 to 10 includes a vibration source that enables vibration to be produced when applying composition, the vibration being produced on an application surface that comes into contact with the
20 keratinous material while the device is in use. In the embodiment in Figure 11, the vibration source is carried on the user's finger.

The frequency of the vibration may lie in the range 5 hertz (Hz) to 10 kilohertz (kHz), better lying in the
25 range 100 Hz to 5000 Hz. In particular exemplary implementations, the vibration frequency lies in the range 100 Hz to 1000 Hz, and in particular in the range 100 Hz to 300 Hz. The vibration source may comprise a vibrator made up of a motor and a flyweight that is
30 rotated by the motor and that has its center of gravity located eccentrically relative to the axis of rotation. The motor may be powered electrically by an energy source such as, for example a cylindrical battery electrically connected to the motor via a switch.

35 The vibration source may include a vibrator other than an electric motor rotating a flyweight and other than a piezoelectric vibrator.

The vibration source may in particular comprise any electromechanical, pneumatic, hydraulic, mechanical, electronic, or electromechanical system capable of producing vibration.

5 The vibration source may include vibration control means other than a simple on/off switch, and in particular it may include mechanical or electronic control means enabling the amplitude and/or the frequency of the vibration to be adjusted. For example, the
10 control means may include a potentiometer or a rotary or linear switch enabling at least two speeds of rotation of the electric motor to be selected, when the vibrator includes such a motor.

 The vibration source may also include more than one
15 vibrator, and for example two vibrators arranged to produce oscillations in different directions. Under such circumstances, the applicator may also, for example, include a selector for selecting the vibrator(s) that is/are to be put into operation.

20 Where appropriate, the vibration source may be oriented by the user so as to cause the application element defining the vibrating application surface to vibrate with vibration of a desired orientation.

 The vibration source may include an energy source
25 other than a battery, and in particular it may include one or more rechargeable batteries or capacitors. The vibration source may be arranged in such a manner as to be suitable for being recharged with electricity when it is placed on a base. Where appropriate, the vibration
30 source may be mains powered, optionally via a transformer.

 The vibration source may be mounted in multiple ways in a housing that corresponds to the applicator or to the packaging and dispenser device, and the way the vibration
35 source is mounted may be designed in such a manner as to encourage vibration to be transferred towards the

application surface or towards the grip surface, for example.

By way of example, the vibration source is placed in the applicator with resilient damper means being
5 interposed between the housing of the applicator and the vibration source. The damper means may for example comprise an elastomer gasket.

Encapsulated compound

10 In the invention, vibration may take place simultaneously to applying an encapsulated compound, e.g. an encapsulated pigment.

In this event, the composition containing the encapsulated compound is applied to keratinous material,
15 and is applied with the help of a source of vibration.

The term "encapsulated pigment" means a pigment that is contained in microcapsules that constitute a shell around the pigment. By way of example, the microcapsules may contain a single type of pigment that corresponds to
20 a single color, or several kinds of pigment.

An encapsulated pigment presents the advantage of being barely visible in the composition, if at all, because of its encapsulation, while being released easily from the microcapsule during application.

25 An encapsulated pigment is different from a coated pigment as commonly used in makeup compositions.

Although coated pigments include a chemical coating seeking to improve their dispersion in the composition, encapsulated pigments include a physical layer that is
30 constituted par the shells of the capsules, said layer being relatively uniform and isolating the encapsulated pigment in sealed manner, such that each encapsulated pigment is indeed individualized in the composition, which does not apply with coated pigments.

35 The pigments that are encapsulated may be selected from: inorganic pigments and organic pigments; optionally

interference pigments; optionally surface-treated pigments; and mixtures thereof.

The pigments may be white or colored, inorganic and/or organic. Amongst inorganic pigments, mention may
5 be made of: titanium dioxide, possibly with surface treatments; oxides of zirconium or cerium; and oxides of zinc, iron (black, yellow, or red), or chromium; manganese violet; ultramarine; chromium hydrate; and ferric blue; and metal powders such as aluminum powder
10 and copper powder.

Amongst organic pigments that can be used in the invention, mention may be made of: carbon black; D & C type pigments; lakes based on cochénille carmine, on barium, strontium, calcium, or aluminum; or even
15 diketopyrrolopyrrole (DPP) described in documents EP-A-542 669, EP-A-787 730, EP-A-787 731, and WO-A-96/08537.

The pigments are preferably encapsulated in microcapsules that are both able to withstand other raw materials present in the composition, and flexible enough
20 to be able to rupture under shear during application, in order to deliver the desired color.

The shells of the microcapsules may be made out of materials selected, for example, from the following materials:

25 • hot-melt compounds having a melting temperature that lies in the range 30°C to 70°C, preferably in the range 37°C to 45°C, e.g. such as those described in US application No. 2006/0292193 A1; by way of example, mention can also be made of microcapsules that are
30 constituted by Jojoba esters sold under the reference Florasome by Floratech, and described in US patent No. 6 432 428;

 • polymers or copolymers such as polyacrylates or methacrylates, and polysaccharides such as cellulose
35 derivatives; by way of example, mention may be made of acrylate and ammonium methacrylate copolymer-based

microcapsules sold by Tagra Biotechnologies Ltd and described in publication WO 01/35933;

- copolymers based on styrene and acrylate, such as microcapsules sold under the trade name Colorsphere by Créations Couleurs.

As an example of pigments encapsulated by cellulose derivatives, mention may be made of spheres comprising mannitol, cellulose, hydroxypropyl methylcellulose, sold by the supplier Induchem under the trade name Unisphere bicolor.

As examples of pigments encapsulated in microcapsules based on acrylate and ammonium methacrylate copolymer, mention may be made in particular of: encapsulated yellow iron oxides sold under the trade name YELLOWCAP1 by Tagra Biotechnologies; encapsulated red iron oxides sold under the trade name REDCAP1 by Tagra Biotechnologies; and encapsulated black iron oxides sold under the trade name BLACKCAP1 by Tagra Biotechnologies.

The size of the microcapsules, i.e. their number average diameter, may lie in the range 20 μm to 3000 μm , preferably in the range 20 μm to 1500 μm , more preferably in the range 20 μm to 700 μm .

The percentage of pigment relative to the total weight of the encapsulated pigment (weight of the encapsulated pigment = weight of the capsule + weight of the pigment) may vary to a large extent. The quantity of pigment may, for example, lie in the range 1% to 95% by weight, preferably in the range 10% to 90%, and still more preferably in the range 15% to 75% by weight, relative to the total weight of the encapsulated pigment.

The composition of the invention may contain a total quantity of encapsulated pigment(s) (weight of the capsule + weight of the pigment(s)) lying, for example, in the range 0.01% to 90% by weight, preferably in the range 0.05% to 75% by weight, and more preferably in the range 0.5% to 50% by weight, relative to the total weight of the composition.

The encapsulated pigments may be conveyed in: anhydrous compositions; water-in-oil (W/O) or oil-in-water (O/W) emulsions or even multiple emulsions; aqueous or oily gels; etc.

5

Mixing separately-packaged compositions

In exemplary embodiments of the invention, two separately-packaged compositions are mixed together while subjecting them to vibration by means of a vibration
10 source. The vibration seeks to improve uniformity during application.

In embodiments, at least one of the compositions is colored, or indeed only one is colored, in particular by pigments. The compositions need not include encapsulated
15 compounds, in particular encapsulated pigment.

By way of example, the first composition need not have coloring agent and may constitute a "neutral base" which may be white or transparent, and the second composition may, for example, include at least one
20 coloring agent or a nacre, or at least one coloring agent and a nacre, or even at least one filler and a coloring agent.

The first and/or the second composition may be in various forms, as a function of purpose. Each
25 composition may thus be in any dosage form normally used for a topical application and in particular in anhydrous form or in the form of an oily or an aqueous solution, an oily or an aqueous gel, an oil-in-water or a water-in-oil emulsion, or a multiple emulsion.

30 One of the compositions, in particular the second composition, may also be in the form of a powder.

Dosage forms

The composition of the invention applied to
35 keratinous material is generally in the form of: a makeup and/or skincare composition for keratinous material, e.g. foundation, in particular for application to the face or

the neck; an concealer composition; a complexion corrector; a tinted cream; a blusher; a lipstick; a lip balm; a makeup or colored skincare composition for the body.

5 As a function of the embodiment (a single composition including an encapsulated compound, or a mixture of two separately-packaged compositions), the person skilled in the art selects the appropriate dosage form, in particular from liquid or solid forms adapted to
10 a topical application to keratinous material, in particular to the skin.

 In particular, each composition may be in the form of: a fluid, e.g. paste or liquid; a gel; a cream; or in the form of loose or compact powder. For example, it may
15 be: an oil-in-water emulsion, a water-in-oil emulsion, or a multiple emulsion; a solid emulsion, in particular of the water-in-oil type; an aqueous or oily gel; a compact or loose powder.

20 Aqueous phase

 A composition of the invention may include an aqueous phase.

 The aqueous phase comprises water. Water that is suitable for use in the invention may be a floral water
25 such as cornflower water and/or mineral water such as Vittel water, Lucas water, or La Roche Posay water, and/or thermal water.

 The aqueous phase may also include organic solvents that are miscible in water (at ambient temperature 25°C)
30 such as for example monoalcohols having 2 to 6 atoms of carbon such as ethanol, isopropanol; polyols having in particular 2 to 20 atoms of carbon, preferably 2 to 10 atoms of carbon, and more preferably 2 to 6 atoms of carbon, such as glycerol, propylene glycol, butylene
35 glycol, pentyleneglycol, hexyleneglycol, dipropyleneglycol, and diethyleneglycol; glycol ethers (having in particular 3 to 16 atoms of carbon) such as mono-, di-,

or tri-propylene glycol alkyl(C₁-C₄)ethers, or mono-, di-, or tri-ethylene glycol alkyl(C₁-C₄)ethers, and mixtures thereof.

5 The aqueous phase may also include stabilizing agents, e.g. sodium chloride, magnesium dichloride, and magnesium sulfate.

10 The aqueous phase may also include any hydrosoluble or hydrodispersible compound that is compatible with an aqueous phase such as gelling agents, film-forming polymers, thickening agents, surfactant agents, and mixtures thereof.

In particular, a composition of the invention may have an aqueous phase of content lying in the range 1% to 80% by weight relative to the total weight of the composition, in particular in the range 5% to 50% by weight, and better in the range 10% to 45% by weight.

In other exemplary embodiments, a composition of the invention may be anhydrous.

20 An anhydrous composition may contain less than 3% by weight of water relative to the total weight of the composition, in particular less than 1% by weight of water relative to the total weight of the composition.

25 More particularly, an anhydrous composition need not contain water, any water not being added while preparing the composition, but corresponding to residual water that is brought by the ingredients that are mixed together.

The cosmetic composition in accordance with the present invention may include at least one liquid and/or solid oily phase.

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

35 The term "oil" is used to designate any oily body that is in liquid form at ambient temperature (20°C-25°C) and at atmospheric pressure.

A composition of the invention may include a liquid oily phase of content lying in the range 1% to 90% by

weight relative to the total weight of the composition, in particular in the range 5% to 80% by weight, in particular in the range 10% to 70% by weight, and better in the range 20% to 50% by weight.

5 The oily phase suitable for the preparation of cosmetic compositions of the invention may comprise hydrocarbon, silicone, or fluorinated or other oils, or mixtures thereof.

 The oils may be volatile or non-volatile.

10 They may be animal, vegetal, mineral, or synthetic in origin.

 In the meaning of the present invention, the term "volatile oil" designates an oil (or non-aqueous medium) that, on contact with the skin, is suitable for
15 evaporating in less than one hour, at ambient temperature and at atmospheric pressure. The volatile oil is a volatile cosmetic oil that is liquid at ambient temperature, having in particular a non zero vapor pressure at ambient temperature and atmospheric pressure,
20 in particular having a vapor pressure lying in the range 0.13 pascals (Pa) to 40,000 Pa (10^{-3} millimeters of mercury (mmHg) to 300 mmHg), and preferably in the range 1.3 Pa to 13,000 Pa (0.01 mmHg to 100 mmHg) and better in the range 1.3 Pa to 1300 Pa (0.1 mmHg to 10 mmHg).

25 In the meaning of the present invention, the term "non-volatile oil" designates an oil having a vapor pressure of less than 0.13 Pa.

 In the meaning of the present invention, the term "silicone oil" designates an oil including at least one
30 silicon atom, and in particular at least one Si-O group.

 The term "fluorinated oil" designates an oil including at least one fluorine atom.

 The term "hydrocarbon oil" designates an oil mainly comprising atoms of hydrogen and carbon.

35 The oils may optionally include atoms of oxygen, nitrogen, sulfur, and/or phosphorous, e.g. in the form of hydroxyl or acid radicals.

Volatile oils

Volatile oils may be selected from hydrocarbon oils having 8 to 16 carbon atoms, in particular branched C₈-C₁₆ alkanes (also known as isoparaffins), such as isododecane (also known as 2,2,4,4,6-pentamethylheptane), isodecane, isohexadecane, and for example the oils sold under the commercial names Isopars® or Permethyls®.

As volatile oils, it is also possible to use volatile silicone oils, such as, for example: volatile linear or cyclic silicone oils, and in particular those having viscosity of ≤8 centistokes (cSt) (8×10^{-6} square meters per second (m²/s)), and in particular having 2 to 10 atoms of silicon, better 2 to 7 atoms of silicon, these silicone oils optionally including alkyl or alkoxy groups having 1 to 10 carbon atoms. As volatile silicone oils usable in the invention, mention may be made in particular of: dimethicones having viscosity of 5 cSt to 6 cSt; octamethyl cyclotetrasiloxane; decamethyl cyclopentasiloxane; dodecamethyl cyclohexasiloxane; heptamethyl hexyltrisiloxane; heptamethyloctyl trisiloxane; heptamethyl disiloxane; octamethyl trisiloxane; decamethyl tetrasiloxane; dodecamethyl pentasiloxane; and mixtures thereof.

It is also possible to use volatile fluorinated oils, such as nonafluoromethoxybutane or perfluoromethylcyclopentane, and mixtures thereof.

In exemplary embodiments, a composition of the invention may comprise volatile oil of content lying in the range 1% to 80% by weight relative to the total weight of the composition, or even in the range 5% to 70% by weight, or in the range 10% to 60% by weight, and in particular in the range 15% to 50% by weight.

Non-volatile oils

The non-volatile oils may in particular be selected from non-volatile hydrocarbon, fluorinated, and/or silicone oils.

As non-volatile hydrocarbon oil, mention may be made
5 in particular of:

- hydrocarbon oils of animal origin, such as perhydrosqualene;

- hydrocarbon oils of vegetable origin, such as phytostearyl esters; such as phytostearyl oleate,
10 phytostearyl isostearate and lauroyl / octyldodecyl / phytostearyl glutamate (Ajinomoto, Eldew PS203), triglycerides constituted by esters of fatty acids and of glycerol, in particular, in which the fatty acids may have chain lengths lying in the range C₄ to C₃₆, and, in
15 particular, C₁₈ to C₃₆, possibly being linear or branched, saturated or unsaturated; said oils may, in particular, be heptanoic or octanoic triglycerides, shea butter, oils of alfalfa, of poppy, of Hokkaido squash, of millet, of barley, of quinoa, of rye, of candlenut, of passion
20 flower, of shea, of aloe vera, of sweet almond, of peach kernel, of peanut, of argan, of avocado, of baobab, of borage, of broccoli, of calendula, of camelina, of canola, of carrot, of safflower, of hemp, of rapeseed, of cotton, of copra, of marrow seed, of wheat germ, of
25 jojoba, of lily, of macadamia nut, of corn, of meadowfoam, of hypericum, of monoi, of hazelnut, of apricot kernel, of walnut, of olive, of evening primrose, of palm, of blackcurrant seed, of kiwi seed, of raisin seed, of pistachio, of Hokkaido squash, of pumpkin, of
30 quinoa, of musk rose, of sesame, of soya, of sunflower, of castor, of watermelon, and mixtures thereof, or triglycerides of caprylic / capric acids, such as those sold by Stearineries Dubois, or those sold under the trade names Miglyol 810®, 812® and 818® by Dynamit Nobel;
35 • linear or branched hydrocarbons, of mineral or synthetic origin, such as paraffin oils and derivatives

thereof, Vaseline, polydecenes, polybutenes, hydrogenated polyisobutene such as Parleam, and squalane;

- synthesized ethers having 10 to 40 carbon atoms;
- synthesized esters, such as oils with formula

- 5 R_1COOR_2 , in which R_1 represents the residue of a linear or branched fatty acid containing 1 to 40 carbon atoms, and R_2 represents a hydrocarbon chain, in particular, branched containing 1 to 40 carbon atoms provided that $R_1 + R_2 \geq 10$. The esters may in particular be selected from
- 10 alcohol and fatty acid esters, e.g. cetostearyl octanoate, isopropyl alcohol esters, such as isopropyl myristate or isopropyl palmitate, ethyl palmitate, 2-ethylhexyl palmitate, stearate or isopropyl isostearate, isostearyl isostearate, octyl stearate, hydroxylated
- 15 esters, such as isostearyl lactate, octyl hydroxystearate, diisopropyl adipate, heptanoates, in particular isostearyl heptanoate, alcohols or polyalcohols of octanoates, decanoates or ricinoleates, such as propylene glycol dioctanoate, cetyl octanoate,
- 20 tridecyl octanoate, 4-diheptanoate and 2-ethylhexyl palmitate, alkyl benzoate, polyethylene glycol diheptanoate, propyleneglycol 2 diethylhexanoate, and mixtures thereof, benzoates of C_{12} to C_{15} alcohols, hexyl laurate, esters of neopentanoic acids, such as isodecyl
- 25 neopentanoate, isotridecyl neopentanoate, isostearyl neopentanoate, and octyldodecyl neopentanoate, isononanoic acid esters, such as isononyl isononanoate, isotridecyl isononanoate, and octyl isononanoate, and hydroxyl esters, such as isostearyl lactate and
- 30 diisostearyl malate;
- esters of polyols, and esters of pentaerythritol, such as dipentaerythritol tetrahydroxystearate / tetraisostearate;
 - esters of dimeric diols and diacid acid dimers,
- 35 such as Lusplan DD-DA5[®] and Lusplan DD-DA7[®], sold by Nippon Fine Chemical and described in US patent application No. 2004-175338;

- copolymers of dimeric diols and diacid dimers and their esters, such as copolymers of dilinoleyl diol dimer and dilinoleic dimer and their esters, such as, for example, Plandool-G;
- 5 • copolymers of polyols and diacid dimers, and their esters, such as Hailuscent ISDA, or dilinoleic acid and butanediol copolymer;
- fatty alcohols that are liquid at room temperature, with a branched and/or unsaturated carbon-
10 based chain containing 12 to 26 carbon atoms, such as 2-octyldodecanol, isostearyl alcohol, oleic alcohol, 2-hexyldecanol, 2-butyloctanol, and 2-undecylpentadecanol;
- C₁₂-C₂₂ higher fatty acids, such as oleic acid, linoleic acid, linolenic acid, and mixtures thereof; and
- 15 • dialkyl carbonates, the two alkyl chains possibly being identical or different, such as dicaprylyl carbonate sold under the trade name Cetiol CC[®], by Cognis;
- oil of high molar mass having, in particular, a molar mass going from 400 grams per mole (g/mol) to about
20 10,000 g/mol, in particular, about 650 g/mol to about 10,000 g/mol, in particular, about 750 g/mol to about 7500 g/mol, and more particularly, lying in the range about 1000 g/mol to about 5000 g/mol. For an oil with a high molar mass that is suitable for use in the present
25 invention, mention may be made in particular of oils selected from:
 - lipophilic polymers;
 - esters of linear fatty acids having a total number of carbon atoms lying in the range 35 to 70;
 - 30 • hydroxylated esters;
 - aromatic esters;
 - esters of C₂₄-C₂₈ branched fatty alcohols or fatty acids;
 - silicone oils;
 - 35 • oils of vegetable origin; and
 - mixtures thereof.

- fluorinated oils, possibly partially hydrocarbon or silicone oils, such as fluorosilicone oils, fluorinated polyethers, fluorinated silicones such as those described in document EP-A-0 847 752;

- 5 • non-volatile, linear, or cyclic silicone oils such as polydimethylsiloxanes (PDMS); polydimethylsiloxanes including, pendant and/or terminal alkyl, alkoxy, or phenyl group, on the silicone chain, said groups each containing 2 to 24 carbon atoms; phenylated silicones
- 10 such as the phenyl trimethicones, phenyl dimethicones, phenyl trimethylsiloxo diphenyl siloxanes, diphenyl dimethicones, diphenyl methyl diphenyl trisiloxanes, 2-phenylethyl trimethylsiloxo silicates; and
- mixtures thereof.

15 A composition of the invention may also include at least one pasty compound.

The presence of a pasty compound makes it possible advantageously to confer improved comfort while the composition of the invention is being deposited in

20 particular on keratinous material (e.g. eyelashes).

Such a compound may advantageously be selected from lanolin and derivatives; optionally polymeric silicone compounds; optionally polymeric fluorinated compounds; vinylic polymers, in particular olefin homopolymers;

25 olefin copolymers; hydrogenated diene homopolymers and copolymers; linear or branched oligomers, homopolymers or copolymers of alkyl (meth)acrylates preferably having a C₈-C₃₀ alkyl group; homopolymers and copolymers of vinylic esters having C₈-C₃₀ alkyl groups; homopolymers and

30 copolymers of vinyl ethers having C₈-C₃₀ alkyl groups; liposoluble polyethers resulting from polyetherification between one or more C₂-C₁₀₀ diols, in particular, C₂-C₅₀ fatty acids or alcohol esters; and mixtures thereof.

Amongst esters, mention may be made in particular

35 of:

- esters of a glycerol oligomer, in particular, diglycerol esters, such as polyglyceryl-2 triisostearate,

condensates of adipic acid and of glycerol, for which some of the hydroxyl groups of the glycerol have reacted with a mixture of fatty acids, such as stearic acid, capric acid, stearic acid and isostearic acid, and 12-hydroxystearic acid, in particular, like those sold under the trade name Softisan 649 by Sasol, or such as bis diglyceryl polyacyladipate-2; arachidyl propionate sold under the trademark Waxenol 801 by Alzo; phytosterol esters; triglycerides of fatty acids and derivatives thereof, such as hydrogenated coco-glycerides; non cross-linked polyesters resulting from the polycondensation between a linear or branched C₄-C₅₀ dicarboxylic acid or carboxylic polyacid, and a C₂-C₅₀ diol or polyol; aliphatic ester of esters resulting from the esterification of an ester of aliphatic hydroxycarboxylic acid by an aliphatic carboxylic acid; polyesters resulting from esterification of an ester of aliphatic hydroxy carboxylic acid by a polycarboxylic acid, said ester including at least two hydroxyl groups, such as Risocast DA-H[®] and Risocast DA-L[®] products; and mixtures thereof.

The pasty compound(s) may be present in a composition of the invention at a content lying in the range 0.1% to 30% by weight of agent relative to the total weight of the composition, and preferably in the range 0.5% to 20% by weight.

A composition of the invention may also contain ingredients that are routinely used in cosmetics, such as vitamins, thickeners, oligo-elements, softeners, sequestering agents, fragrances, alkalinizing or acidifying agents, preservatives, sun screens, surfactant agents, antioxidants, anti-hairloss agents, anti-dandruff agents, propellants, or mixtures thereof.

Naturally, the person skilled in the art will take care to select any such additional compound and/or the quantity thereof in a manner such that the advantageous properties of the corresponding composition of the

invention are altered little or not at all by the intended addition.

Examples of devices for implementing the invention

5 The devices in Figures 1 to 5 and 8 are better suited to application to the skin, whereas the device in Figure 6 is better suited to application to the lips, and the device in Figure 7 is better suited to applying makeup to the eyelashes. Naturally, the applicator
10 element used is adapted to the region being treated.

 The devices in Figures 1 to 7 and 11 are for applying a composition P containing an encapsulated compound, as defined above.

 The devices in Figures 8 and 10 contain two
15 compositions P and P' that are stored separately and that are for mixing extemporaneously, e.g. as defined below.

 The device 1 shown in Figure 1 comprises a container
2 containing the composition P for application, and an applicator 3 that is suitable for being housed inside the
20 container when said container is closed by a closure cap 4. The applicator 3 includes a handle portion 6 housing a vibration source 8 including an energy source 7 and an ON/OFF switch 9. In these exemplary embodiments, the vibration source 8 includes an electric motor that
25 rotates a fly-weight, but the vibration source may be made in any other way. By way of example, the application surface 15 of the applicator 3 may be defined by a skin 16 that covers a foam 17, for example. The motor and the fly-weight are contained in a housing 18 of
30 the applicator. The container 2 may include a perforated wall 19 separating the compartment containing the composition P from the compartment from which the composition is taken by the application surface 15.

 Figure 2 shows a device 1 that includes a container
35 2 containing the composition P for application, and a vibration source 8 that is secured to the container 2 while said device is being used.

The container 2 includes a neck 30 on which there is mounted a support piece 31 for supporting a porous applicator member 32, e.g. a foam. A protective cap 4 may be screw-fastened on the support piece 31. On the side remote from the neck 30, the container 2 includes a bottom wall 35 that is extended downwards at its periphery by a tubular skirt 36 housing the vibration source 8. The vibration source comprises an energy source 7 that is constituted by button batteries in the embodiment shown, and an electric motor that is suitable for rotating a fly-weight about an axis of rotation that is substantially perpendicular to the longitudinal axis of the container 2. A switch 9 makes it possible to switch the motor on.

In the variant shown in Figure 3, the vibration source 8 is in a removable unit, the skirt 36 being provided so as to enable the unit to be mounted and removed, which unit may then be reused on another container once the current container is empty.

In the variant embodiment shown in Figure 4, the device includes a vibration source 8 that may be fastened in removable manner on the applicator, and said applicator closes the container 2 when not in use. The vibration source may be switched on by a switch 9 provided on an end face of the applicator.

In the variant shown in Figure 5, the device includes a removable reservoir 40, and the applicator 3 houses the vibration source 8.

By way of example, the applicator 3 includes a shell 45 that is provided at its center with a housing for receiving the container containing the composition P for application, which container may supply the applicator element by capillarity, for example. By way of example, the applicator element is constituted by a foam or by any other porous element in which the composition may diffuse, e.g. a sintered element.

Figure 6 shows a device 1 for applying a composition P to the lips, said device including a container 2 in which a piston 48 is slidably mounted, making it possible to force the composition towards an applicator element 49 that, in the embodiment shown, is constituted by a flocked piece, fed with composition via at least one internal channel 50.

The piston 48 is moved by a drive portion 52 on which the vibration source 8 may be fastened in optionally-removable manner

By way of example, reference may be made to US patents Nos. 6 688 317 and 5 879 095 that describe, in greater detail, drive mechanisms for driving a piston.

In the embodiment in Figure 7, the container 2 is conventional and includes a body 60 provided with an externally-threaded neck 6. A wiper member 65 is fastened in the neck 61. The applicator 3 includes an applicator element 70 that is constituted by a mascara brush, in the example under consideration. The applicator element 70 is mounted at the end of a stem 71, the other end of which is secured to a casing 74 that includes an end portion that is arranged to be screw-fastened on the neck, thereby closing the container in leaktight manner. The casing 74 houses a vibration source 8 making it possible to cause the applicator element to vibrate during application of the composition P.

The device 1 shown in Figure 8 includes two reservoirs 81 and 82 containing respective compositions P and P', and an application surface 15 that, in the embodiment under consideration, is defined by a flocked wall 97 through which dispenser orifices 85 and 86 pass, communicating with the reservoirs 81 and 82, respectively.

The flocked wall 97 is fitted on a support 90 that includes two openings in which necks 91 and 92 of the reservoirs 81 and 82 are engaged respectively.

The support 90 may contribute to holding the reservoirs stationary relative to each other, and may further include an externally-threaded skirt so as to make it possible to mount a closure cap, not shown.

5 The flocked wall 97 may be made integrally with ducts 101 and 102 that come to be engaged on the necks 91 and 92 respectively, so as to provide substantially-leaktight communication between the reservoirs and the dispenser orifices.

10 The flocked wall 97 may be molded out of a flexible material, so as to constitute a flexible membrane making it possible to increase comfort in application. In particular, it may be made in such a manner as to enable the application surface 15 to move to some extent during
15 use, the ducts 101 and 102 advantageously being made in such a manner as to be able to slide over the necks 91 and 92 while the flocked wall 97 is being pressed down relative to the reservoirs 81 and 82.

Various means may be used to bring the compositions
20 P or P' onto the application surface 15.

By way of example, the reservoirs 81 and 82 may have flexible walls, so that the user can cause their contents to be dispensed by squeezing their walls.

The device 1 includes a vibration source, not shown,
25 that is fastened on the reservoirs 81 and 82, for example.

The device 1 shown in Figure 10 includes two containers 81 and 82 containing first and second compositions P and P' respectively, for being mixed
30 together.

The device 1 includes a dispenser head 110 that, in the embodiment shown, comprises a stationary base portion 111 and a pushbutton 112 that is movable relative to the base portion and that is arranged to actuate one or two
35 pumps, not shown in the figures. In the embodiment under consideration, the pushbutton 112 is provided with an

application surface 15 for dispensing the compositions P and P'.

The base portion 111 may include at least one window 115, giving access to an adjuster member 120 that makes
5 it possible to adjust the proportions of the compositions P and P' in the preparation being dispensed.

In the embodiment shown, the adjuster member 120 turns about the longitudinal axis of the device 1 and includes a series of positions, indicated by numbers for
10 example, enabling the user to select the proportion of one of the compounds in the resulting mixture by positioning one of the numbers under an indicator 130 of the base portion 111.

In the embodiment in Figure 10, the mixing of the
15 compositions P and P' in proportions that are determined by adjusting the adjuster member takes place in part inside the device 1, but it would not be beyond the ambit of the present invention for mixing to be performed entirely outside the device 1, said device being provided
20 with two dispenser orifices for dispensing the respective compositions P and P' separately.

It would not be beyond the ambit of the present invention for the applicator to include some other applicator element, e.g. a brush, a comb, a paint brush,
25 a flocked endpiece, a sintered element, a wipe, a block of the mixture, or an applicator that retains the mixture by capillarity.

It is possible to use other devices that are provided with a vibration source, in particular the
30 devices described in European patent application EP 1 040 773, application WO 2006/090343, and US patent Nos. 5 568 883, 5 971 210, 4 893 729, and 5 143 261, incorporated herein by reference.

In the variant shown in Figure 11, a vibration
35 source 8 is mounted on the user's finger, as described in application FR 2 904 923. The application surface may be defined by the end of the finger that comes into contact

with the composition so as to take it and apply it, or, in a variant, by an applicator pad that is fastened on the finger.

The expression "comprising a" should be understood as being synonymous with "comprising at least one".

The invention is not limited to the applicators shown.

The invention is illustrated by the following non-limiting examples.

EXAMPLES

Example 1: Examples of compositions having encapsulated pigment

Composition I - O/W Foundation

		% by weight
A1	Water	33.93
	Preservatives	0.80
A2	Magnesium aluminum silicate (Veegum)	1.10
	Water	9.90
	Titanium dioxide	5.00
B	Dimyristyl tartrate, cetearyl alcohol, C12-15 Pareth-7 and PPG-25 Laureth-25 sold under the reference Cosmacol PSE by Sasol	1.50
	Glyceryl stearate/PEG 100 stearate sold under the reference Arlacel 165 FL by Croda	2.00
	Stearyl alcohol	1.00
	Isononyl isononanoate	10.20
	Hydrogenated polyisobutene (Parleam)	3.40
	Ethylhexyl methoxycinnamate	1.40
	Isohexadecane	5.70

C	Water	3.85
	Xanthan gum	0.15
D	Water	9.75
	Sodium hyaluronate	0.25
E	Aluminum starch octenylsuccinate sold under the reference Dryflo plus by National Starch	3.00
F	Encapsulated yellow iron oxide sold under the reference YellowCap1 by Tagra Biotechnologies	4.90
	Encapsulated red iron oxide sold under the reference RedCap1 by Tagra Biotechnologies	2.10
	Encapsulated black iron oxide sold under the reference BlackCap1 by Tagra Biotechnologies	0.07
TOTAL		100%

Method of operation

The ingredients of phase A1 were weighed and brought to boiling until they were completely dissolved.

5 Phase A2 was prepared separately: magnesium aluminosilicate was dispersed in water, and then titanium dioxide was added. The resulting mixture was then ground three times with a three-cylinder grinder, and phase A2 was added to phase A1 while stirring.

10 The ingredients of phase B were weighed and heated to 75°C. Once the phase was uniform, it was added under Moritz stirring (3000 revolutions per minute (rpm)) to the previous mixture (A1+A2) at a temperature of 75°C.

15 Phases C and D were prepared separately using Raynerie stirring.

Phase C was then added at 45°C using Raynerie stirring, then phases D, E, and F were added at 30°C still using Raynerie stirring.

Composition II - W/O Foundation

		% by weight
A	Cetyl PEG/PPG-10/1 dimethicone sold under the reference ABIL EM 90 by Goldschmidt	1.63
	Polyglycerol isostearate sold under the reference ISOLAN GI 34 by Goldschmidt	0.54
	Isohexadecane	4.35
	Squalane	2.00
	Polydimethylsiloxane (10 cSt)	2.22
	Apricot kernel oil	1.20
	Cyclohexasiloxane	9.77
	Propyl paraben	0.16
B	Demineralized water	58.90
	Methyl paraben	0.27
	Phenoxyethanol	0.54
	Magnesium sulfate	1.90
	Propylene glycol	3.26
C	Nylon 12 powder	3.26
D	Mixture of encapsulated pigments sold under the reference Unisphere Bicolor by Induchem	10.00
	TOTAL	100%

5 Method of operation

The ingredients of phase A were weighed into the main beaker that was heated to 60°C-70°C.

After homogenization by stirring with a magnetic bar, the phase was left to cool in a bath of cold water so as to reach a temperature of 20°C.

The aqueous phase B was prepared separately: the ingredients were weighed into a beaker that was brought to boiling. After homogenizing, the phase was left to

cool in a bath of cold water so as to reach a temperature of 20°C.

The emulsion was made at ambient temperature by slowly pouring phase B into phase A, and by using Moritz
5 stirring at a speed of 2000 rpm.

Phase C was then added stirring in the same way, then phase D was finally added, stirring very slowly using Raynerie stirring.

10 Applying makeup

Composition I was applied with an applicator as described in Figure 6 of patent application EP 1 842 520, and as reproduced in Figure 1 of the present application.

On the first half of the face, the applicator was
15 used in vibrating mode, whereas on the other half, the same applicator was used without vibration.

It was observed that the vibration made it easier for the color to be revealed during application. The makeup effect obtained with vibration is more uniform.

20 Similar results were obtained with composition II applied with a vibrator applicator used in vibrating mode on one half of the face and without vibration on the other half of the face.

25 Example 2: Extemporaneous mixing of two compositions packaged in separate manner

The two compositions below may be mixed during application, while being subjected to vibration.

30 Neutral base (colorless)

1,3-butylene glycol	10
Hectorite modified by distearyl dimethyl ammonium chloride (sold under the name Bentone 38 V by Elementis)	1.6
Preservatives	0.9
Cyclopenta dimethylsiloxane	15.6

Isostearyl neopentanoate	0.5
Sodium chloride	0.7
Isododecane	12.7
Cyclohexadimethylsiloxane	7.7
Polydimethylsiloxane (DC 200 Fluid 5 is sold by Dow Corning)	2
Cetyl dimethicone copolyol (sold under the trade name ABIL EM 90 by Goldschmidt)	0.8
Polyglycerol isostearate	0.6
Isocicosane	2
Hexyl laurate	0.6
Hollow microspheres of methyl polymethacrylate sold under the trade name COVABEAD LH85 by Wackherr)	2
Polymethylmethacrylate powder(sold under the trade name JURYMER MBI by Nihon Junyaku)	2
Oxyethylene polydimethylsiloxane sold under the trade name KF-6017 by SHIN ETSU)	5
Water	qsp 100

Colored formula

1,3-butylene glycol	10
Hectorite modified by distearyl dimethyl ammonium chloride (sold under the name Bentone 38 V by Elementis)	1.6
Preservatives	0.9
Cyclopenta dimethylsiloxane	15.6
Isostearyl neopentanoate	0.5
Sodium chloride	0.7
Isododecane	12.7
Cyclohexadimethylsiloxane	7.7
Polydimethylsiloxane (DC 200 Fluid 5 is sold by Dow Corning)	2
Cetyl dimethicone copolyol (sold under the trade name ABIL EM 90 by Glodschmidt)	0.8

Polyglycerol isostearate	0.6
Isocicosane	2
Hexyl laurate	0.6
Hollow microspheres of methyl polymethacrylate sold under the trade name COVABEAD LH85 by WACKHERR)	2
Polymethylmethacrylate powder(sold under the trade name JURYMER MBI by NIHON JUNYAKU)	2
Oxyethylene polydimethylsiloxane sold under the trade name KF-6017 by SHIN ETSU)	5
Yellow iron oxide coated with perfluoroalkyl phosphate in dispersion in decamethyl ylopentasiloxane/dimethicone copolyol (sold under the trade name FA50DYF by KOB0)	3.18
Brown iron oxide coated with perfluoroalkyl phosphate in dispersion in cyclomethicone/dimethylpolysiloxane copolyol (sold under the trade name FA50DRF by KOB0)	0.86
Black iron oxide coated with perfluoroalkyl phosphate in dispersion in decamethylcylopentasiloxane/dimethicone copolyol (sold under the trade name FA65DBF by KOB0)	0.44
Alumina-treated titanium oxide coated with perfluoroalkyl phosphate in decamethyl cylopentasiloxane/dimethicone copolyol (sold under the trade name FA65DF by KOB0)	10.52
Water	qsp 100

The two compositions mix together better with the applicator vibrating, and makeup is applied to the skin in a more uniform manner.

CLAIMS

1. A cosmetic treatment method for treating human keratinous material, in particular the skin, the lips, or keratinous fibers, the method comprising:
 - 5 • taking or dispensing, from a packaging device, at least two compounds that are initially separate within the packaging device; and
 - bringing the compounds into contact with keratinous material and subjecting the compounds to vibration from a vibrating application surface while they are being mixed together.
2. A method according to claim 1, one of the compounds being contained in microcapsules that are in contact with the other compound, and the microcapsules being broken during application.
3. A method according to claim 1, the two compounds being contained in distinct reservoirs within the packaging device.
4. A method according to any preceding claim, wherein it is possible to vary the proportion of one of the compounds in the mixture.
5. A packaging and applicator device comprising:
 - two cosmetic compounds contained in the device out of contact with each other by means of at least one of the compounds being encapsulated and/or both compounds being stored separately in distinct reservoirs of the device;
 - an applicator (3); and
 - a vibration source (8) for generating vibration in the applicator during application of the compounds to human keratinous material, with the applicator.

6. A device according to the preceding claim, the micro-encapsulated compound being contained in hot-melt capsules.
- 5 7. A device according to claim 5 or claim 6, the micro-encapsulated compound being contained in capsules based on an acrylic polymer or on polysaccharides or on cellulose derivatives.
- 10 8. A device according to any one of claims 5 to 7, the size of the microcapsules lying in the range 20 μm to 3000 μm .
9. A device according to any one of claims 5 to 8, at
15 least one of said compounds being colored.
10. A device according to any one of claims 5 to 9, the frequency of vibration lying in the range 5 Hz to 10 kHz, better lying in the range 100 Hz to 5000 Hz.
20
11. A device according to any one of claims 5 to 10, the applicator presenting a grip surface that is closer to the vibration source than is the application surface.
- 25 12. A device according to claim 5, the two compounds being contained in distinct reservoirs.
13. A device according to claim 12, including an adjuster system making it possible to vary the concentration of
30 one of the compounds in the mixture.
14. A device according to claim 12 or claim 13, les compounds being dispensed separately until they reach an application surface (15).

1 / 2

FIG. 7

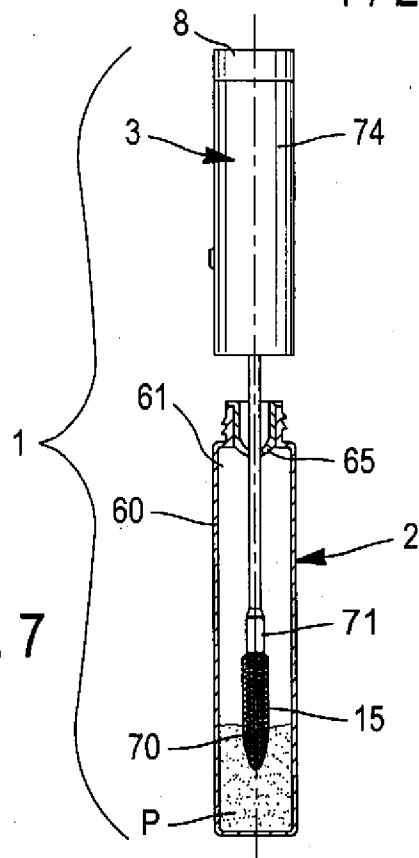


FIG. 3

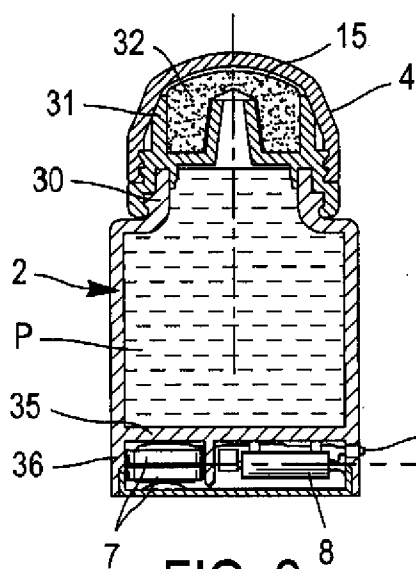
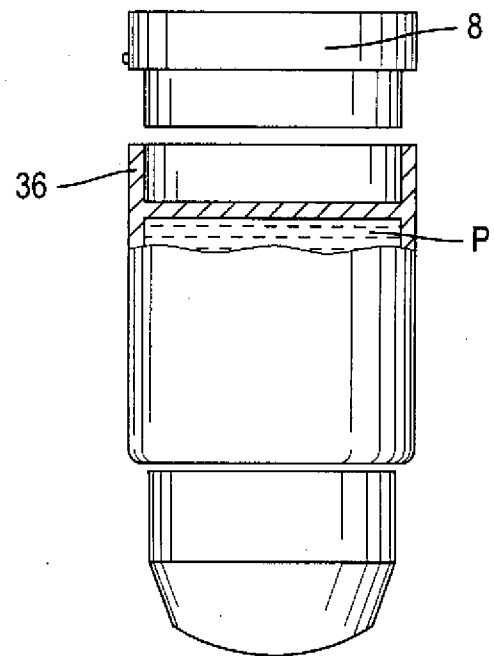


FIG. 2

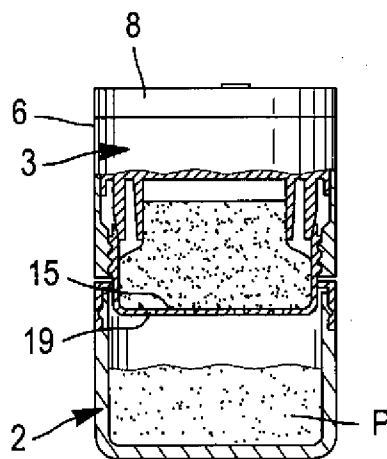


FIG. 4

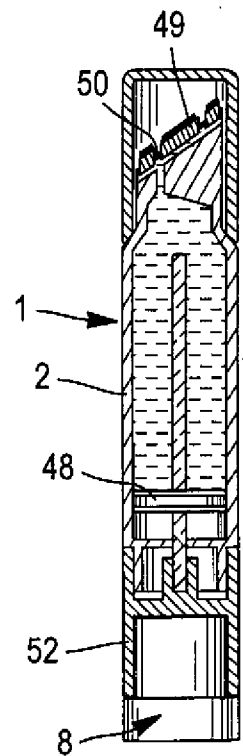


FIG. 6

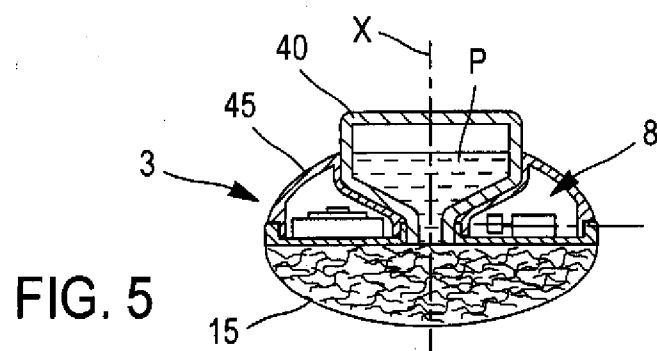
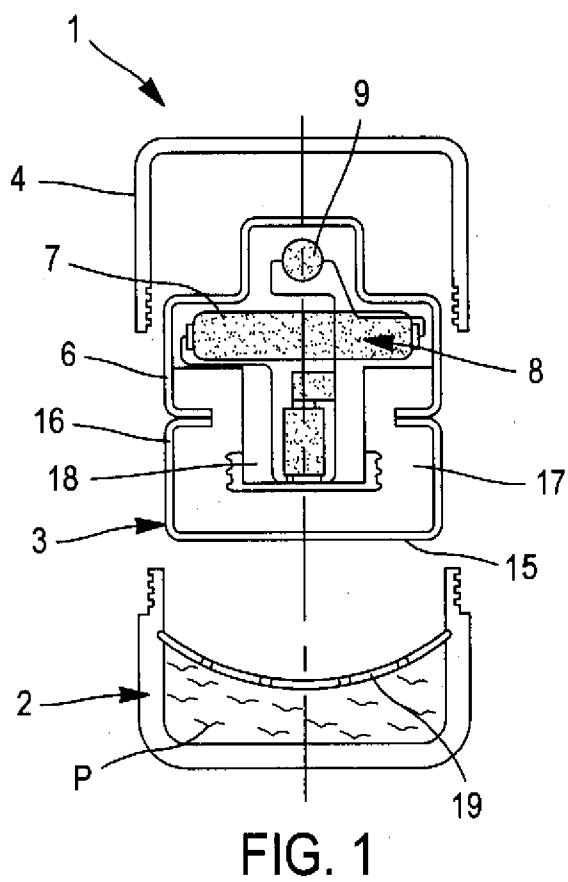
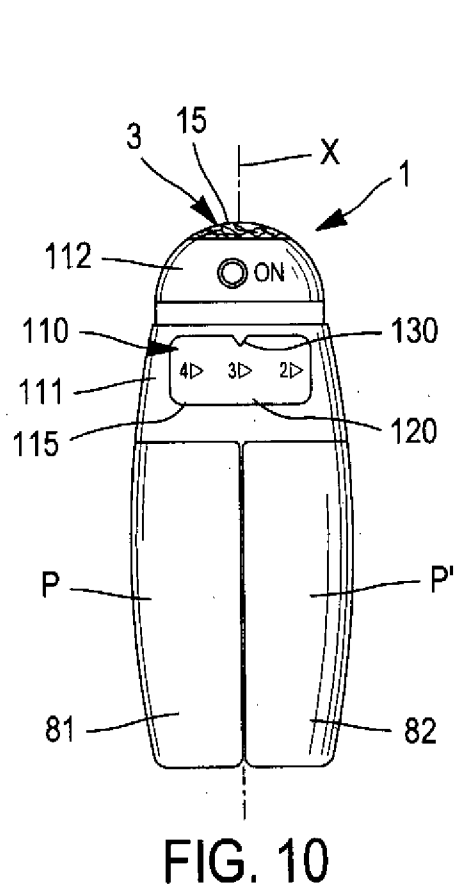
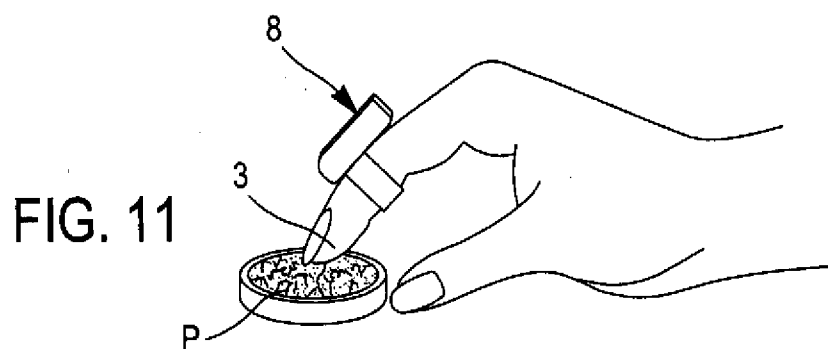
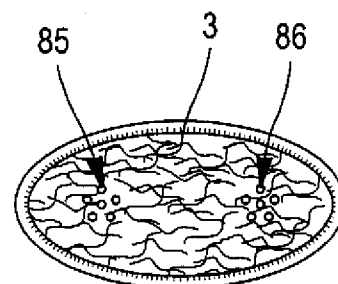
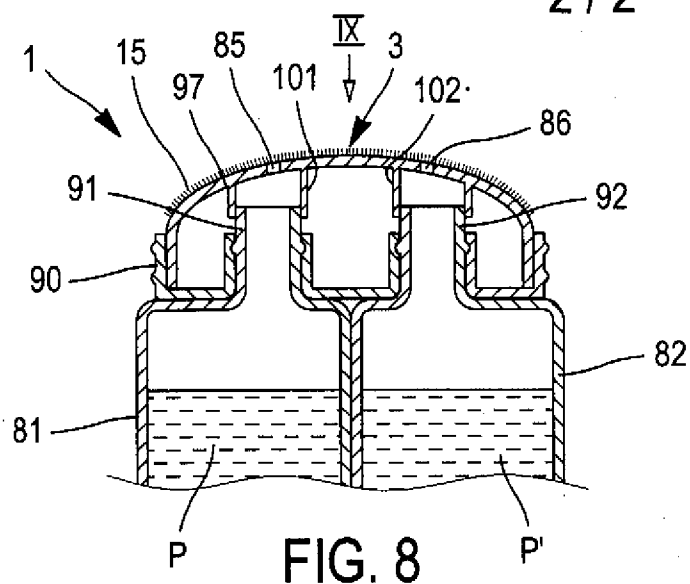


FIG. 5

2 / 2



INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2009/055795

A. CLASSIFICATION OF SUBJECT MATTER
INV. A45D40/24 A45D40/26 A45D40/28

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A45D

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)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 2 374 045 A (CLOUSTON SUSAN [GB]) 9 October 2002 (2002-10-09)	5,9-13
A	the whole document	1-4
Y	EP 1 867 248 A2 (OREAL [FR]) 19 December 2007 (2007-12-19)	1,3-4
A	cited in the application the whole document	5-14
Y	US 3 030 967 A (FRANCOIS PEYRON ANTOINE) 24 April 1962 (1962-04-24)	1,3-4
A	the whole document	5-14
A	US 2008/087296 A1 (GUERET JEAN-LOUIS [FR]) 17 April 2008 (2008-04-17)	1,3-5, 9-14
	the whole document	
	----- -/--	



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.

"&" document member of the same patent family

Date of the actual completion of the international search

26 February 2010

Date of mailing of the international search report

04/03/2010

Name and mailing address of the ISA/

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

Authorized officer

Nicolás, Carlos

INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2009/055795

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2006/090343 A1 (OREAL [FR]; GUERET JEAN-LOUIS [FR]) 31 August 2006 (2006-08-31) cited in the application the whole document -----	1,3-5, 9-14
A	US 2003/075195 A1 (SAKSA THOMAS A [US]) 24 April 2003 (2003-04-24) the whole document -----	1,5
A	WO 99/01052 A1 (HENLOPEN MFG CO INC [US]) 14 January 1999 (1999-01-14) abstract -----	2,6-8

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2009/055795

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 2374045	A	09-10-2002	NONE	
EP 1867248	A2	19-12-2007	FR 2900550 A1	09-11-2007
			US 2007258749 A1	08-11-2007
US 3030967	A	24-04-1962	NONE	
US 2008087296	A1	17-04-2008	EP 1920676 A1	14-05-2008
			FR 2904923 A1	22-02-2008
WO 2006090343	A1	31-08-2006	EP 1858366 A1	28-11-2007
			FR 2882506 A1	01-09-2006
			US 2009071501 A1	19-03-2009
			US 2008138138 A1	12-06-2008
US 2003075195	A1	24-04-2003	EP 1304056 A2	23-04-2003
			JP 3847695 B2	22-11-2006
			JP 2003210248 A	29-07-2003
WO 9901052	A1	14-01-1999	EP 0998209 A1	10-05-2000