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(54) Title: MATT-EFFECT COMPOSITION COMPRISING HYDROPHOBIC AEROGEL PARTICLES AND AN ETHER OF POLYOL AND OF POLYALKYLENE GLYCOLS

(57) Abstract: The present invention relates to a cosmetic and/or dermatological composition comprising, in a physiologically acceptable medium: a) at least hydrophobic aerogel particles and b) at least one ether of polyol and of polyalkylene glycols of formula (I). Another subject-matter of the invention is a method for making the skin matt and/or for reducing its shininess.



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Matt-effect composition comprising hydrophobic aerogel particles and an ether of polyol and of polyalkylene glycols

The present invention relates to the field of caring for and/or making up
5 keratinous substances, in particular the skin.

The invention relates to a cosmetic and/or dermatological composition
comprising, in a physiologically acceptable medium, at least hydrophobic
10 aerogel particles and at least one ether of polyol and of polyalkylene glycols.

The invention also relates to a method for caring for and/or making up the skin,
comprising the topical application of the composition to the skin.

The invention also relates to a cosmetic method for making the skin matt and/or
15 for reducing its shininess, comprising the topical application to the said skin of
the abovementioned composition.

The shininess of the skin, generally associated with a substantial secretion of
sebum, is a problem essentially affecting adolescents but which can also
20 appear in adulthood as a result in particular of an overproduction of androgens
or of external factors, such as pollution. The shininess of the skin can also be
linked to sweat resulting from physical activity or weather conditions. The
shininess of the skin can be due to the combination of the two phenomena
(sebum and sweat).

25 Obtaining a matt effect on the skin is highly desired by users who have
combination skin or greasy skin, and also for cosmetic compositions intended to
be used in hot and humid climates. This is because the reflections caused by an
excess of sebum and/or sweat on the surface of the skin are generally regarded
30 as unsightly.

Shiny skin also generally gives rise to poorer staying power of the make-up,
which thus has a tendency to deteriorate during the day.

35 Besides the use of "sebum regulators", that is to say agents which are capable
of aiding in regulating the activity of the sebaceous glands by means of an
action which can be described as biological, an efficient means for rapidly
reducing awkward shininess areas consists in using "soft-focus" fillers. The use
of fillers which absorb sebum and perspiration is also a means for prolonging
40 the mattness over time.

It is known practice to use perlite (FR 2 881 643), fumed fillers (EP 1 637 186) or fibres as mattifying agents. However, these fillers can provide adverse results, in particular pilling on the skin and/or a perception of unclean skin. It is thus sought to limit the filler content.

5

The need remains to have available mattifying cosmetic compositions which have good cosmetic properties and which in particular provide an effective (strong), immediate and/or long-lasting mattifying effect.

10 The need also remains to obtain a stable aqueous composition comprising hydrophobic aerogel particles well dispersed in the composition and having very good cosmetic properties, in particular of softness and spreading.

The Applicant Company has discovered that this need can be satisfied by combining, in a composition, at least hydrophobic aerogel particles and at least
15 one ether of polyol and of polyalkylene glycols.

The composition is homogeneous and stable.

Skin treated with these compositions has a soft and clean feel with a sensation of bare skin, without filler. Furthermore, the users experience a sensation of firmness and comfort.

20 The composition thus obtained also makes it possible to improve the mattness of the skin in a long-lasting fashion. The skin thus remains durably matt.

A subject-matter of the present invention is thus a cosmetic and/or dermatological composition comprising, in a physiologically acceptable medium:

- a) at least hydrophobic aerogel particles,
- 25 b) at least one ether of polyol and of polyalkylene glycols of formula (I) below.

The constituents of the composition according to the invention will now be described in more detail.

30

HYDROPHOBIC AEROGELS

Aerogels are ultra-light porous materials. The first aerogels were made by Kristler in 1932. They are generally synthesized via a sol-gel process in a liquid
35 medium and then dried, usually by extraction with a supercritical fluid, the one most commonly used being supercritical CO₂. This type of drying makes it possible to avoid the contraction of the pores and of the material. Other types of drying also make it possible to obtain porous materials starting from gel, namely freeze drying, which consists in solidifying the gel at low temperature and in
40 then subliming the solvent, and drying by evaporation. The materials thus obtained are referred to respectively as cryogels and xerogels. The sol-gel

process and the various drying operations are described in detail in Brinker C.J. and Scherer G.W., Sol-Gel Science, New York, Academic Press, 1990.

5 The aerogel particles in accordance with the present invention are hydrophobic aerogel particles.

10 The term "hydrophobic aerogel particles" is understood to mean any particle of the aerogel type exhibiting a water absorption capacity at the wet point of less than 0.1 ml/g, i.e. less than 10 g of water per 100 g of particle.

15 The wet point corresponds to the amount of water which needs to be added to 1 g of particle in order to obtain a homogeneous paste. This method is derived directly from the method for determining the oil uptake of a powder described in Standard NF T 30-022. The measurements are taken in the same way via the wet point and the flow point, which respectively have the following definitions:

20 wet point: weight, expressed in grams per 100 g of product, corresponding to the production of a homogeneous paste during the addition of a solvent to a powder.

The wet point is measured according to the following protocol:

Equipment used:
Glass plate (25 x 25 mm)
25 Spatula wooden shaft and metal part (15 x 2.7 mm)
Silk-bristled brush
Balance

30 The glass plate is placed on the balance and 1 g of aerogel is weighed out. The beaker containing the solvent and the liquid sampling pipette is placed on the balance. The solvent is gradually added to the powder, the whole being evenly kneaded (every 3 to 4 drops) with the spatula. The weight of solvent required to reach the wet point is noted. The mean of three tests will be determined.

35 The hydrophobic aerogels used according to the present invention can be organic, inorganic or organic-inorganic hybrid aerogels.

40 The organic aerogels can be based on resins from among the following: polyurethanes, resorcinol-formaldehyde, polyfurfuranol, cresol-formaldehyde, phenol-furfuranol, polybutadiene, melamine-formaldehyde, phenol-furfural, polyimides, polyacrylates, polymethacrylates, polyolefins, polystyrenes,

polyacrylonitriles, phenol-formaldehyde, polyvinyl alcohol, dialdehydes, polycyanurates, epoxys, celluloses, cellulose derivatives, chitosan, agar, agarose, alginate, starches and their mixtures.

- 5 Aerogels based on organic-inorganic hybrids, for example silica-PMMA, silica-chitosan and silica-polyether, are also envisaged. Patent Applications US2005/0192366 and WO 2007126410 describe such organic-inorganic hybrid materials.
- 10 The hydrophobic aerogel particles used in the present invention exhibit a specific surface per unit of weight (S_w) ranging from 200 to 1500 m²/g, preferably from 600 to 1200 m²/g and better still from 600 to 800 m²/g, and a size, expressed as volume-average diameter ($D[0.5]$), of less than 1500 μ m and preferably ranging from 1 to 30 μ m, more preferably from 5 to 25 μ m, better still
- 15 from 5 to 20 μ m and even better still from 5 to 15 μ m.

The specific surface per unit of weight can be determined by the nitrogen absorption method, known as the BET (Brunauer-Emmett-Teller) method, described in The Journal of the American Chemical Society, Vol. 60, page 309,

20 February 1938 and corresponding to International Standard ISO 5794/1 (appendix D). The BET specific surface corresponds to the total specific surface of the particles under consideration.

The sizes of the aerogel particles according to the invention can be measured

25 by static light scattering using a commercial particle sizer of MasterSizer 2000 type from Malvern. The data are processed on the basis of the Mie scattering theory. This theory, which is exact for isotropic particles, makes it possible to determine, in the case of non-spherical particles, an "effective" particle diameter. This theory is described in particular in the publication by Van de Hulst, H.C., "Light Scattering by Small Particles", Chapters 9 and 10, Wiley,

30 New York, 1957.

According to an advantageous embodiment, the hydrophobic aerogel particles used in the present invention exhibit a specific surface per unit of weight (S_w)

35 ranging from 600 to 800 m²/g and a size, expressed as volume-average diameter ($D[0.5]$), ranging from 5 to 20 μ m and better still from 5 to 15 μ m.

The hydrophobic aerogel particles used in the present invention can advantageously exhibit a packed density ρ ranging from 0.02 g/cm³ to 0.10

40 g/cm³ and preferably from 0.02 g/cm³ to 0.08 g/cm³.

In the context of the present invention, this density can be assessed according to the following protocol, known as the packed density protocol:

40 g of powder are poured into a graduated measuring cylinder; the measuring
5 cylinder is then placed on the Stav 2003 device from Stampf Volumeter; the measuring cylinder is subsequently subjected to a series of 2500 packing actions (this operation is repeated until the difference in volume between two consecutive tests is less than 2%); the final volume V_f of packed powder is then measured directly on the measuring cylinder. The packed density is determined
10 by the ratio w/V_f , in the case in point $40/V_f$ (V_f being expressed in cm^3 and w in g).

According to one embodiment, the hydrophobic aerogel particles used in the present invention exhibit a specific surface per unit of volume S_v ranging from 5
15 to $60 \text{ m}^2/\text{cm}^3$, preferably from 10 to $50 \text{ m}^2/\text{cm}^3$ and better still from 15 to $40 \text{ m}^2/\text{cm}^3$.

The specific surface per unit of volume is given by the relationship: $S_v = S_w \cdot \rho$, where ρ is the packed density expressed in g/cm^3 and S_w is the specific surface
20 per unit of weight expressed in m^2/g , as defined above.

Preferably, the hydrophobic aerogel particles according to the invention have an oil absorption capacity, measured at the wet point, ranging from 5 to 18 ml/g, preferably from 6 to 15 ml/g and better still from 8 to 12 ml/g.
25

The absorption capacity measured at the wet point, denoted W_p , corresponds to the amount of oil which needs to be added to 100 g of particles in order to obtain a homogeneous paste.

30 It is measured according to the "wet point" method or method for determining the oil uptake of a powder described in Standard NF T 30-022. It corresponds to the amount of oil adsorbed onto the available surface of the powder and/or absorbed by the powder by measurement of the wet point, described below:

35 An amount $w = 2 \text{ g}$ of powder is placed on a glass plate, and the oil (isononyl isononanoate) is then added dropwise. After addition of 4 to 5 drops of oil to the powder, mixing is carried out using a spatula, and addition of oil is continued until conglomerates of oil and powder have formed. From this point, the oil is added at the rate of one drop at a time and the mixture is subsequently
40 triturated with the spatula. The addition of oil is stopped when a firm and smooth paste is obtained. This paste must be able to be spread over the glass plate

without cracks or the formation of lumps. The volume V_s (expressed in ml) of oil used is then noted.

The oil uptake corresponds to the ratio V_s/w .

5

According to a specific embodiment, the aerogel particles used are inorganic and are more particularly hydrophobic silica aerogel particles exhibiting the properties stated above.

- 10 Silica aerogels are porous materials obtained by replacing (in particular by drying) the liquid component of a silica gel with air.

They are generally synthesized via a sol-gel process in a liquid medium and then dried, usually by extraction with a supercritical fluid, the one most
15 commonly used being supercritical CO_2 . This type of drying makes it possible to avoid the contraction of the pores and of the material. The sol-gel process and the various drying operations are described in detail in Brinker C.J. and Scherer G.W., Sol-Gel Science, New York, Academic Press, 1990.

- 20 The hydrophobic silica aerogels used according to the present invention are preferably silica silylate aerogels (INCI name: silica silylate).

The term "hydrophobic silica" is understood to mean any silica, the surface of which is treated with silylating agents, for example with halogenated silanes,
25 such as alkylchlorosilanes, siloxanes, in particular dimethylsiloxanes, such as hexamethyldisiloxane, or silazanes, so as to functionalize the OH groups with silyl groups Si-R_n , for example trimethylsilyl groups.

- 30 As regards the preparation of hydrophobic silica aerogel particles modified at the surface by silylation, reference may be made to the document US 7 470 725.

Use will in particular be made of aerogel particles of hydrophobic silica modified at the surface with trimethylsilyl groups (trimethylsilyl silica).

35

- Mention may be made, as hydrophobic silica aerogels which can be used in the invention, for example, of the aerogel sold under the name VM-2260 (INCI name: Silica silylate) by Dow Corning, the particles of which exhibit a mean size of approximately 1000 microns and a specific surface per unit of weight ranging
40 from 600 to 800 m^2/g .

Mention may also be made of the aerogels sold by Cabot under the references Aerogel TLD 201, Aerogel OGD 201 and Aerogel TLD 203, Enova® Aerogel MT 1100 and Enova Aerogel MT 1200.

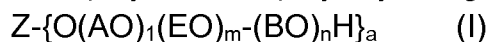
- 5 Use will more particularly be made of the aerogel sold under the name VM-2270 (INCI name: Silica silylate) by Dow Corning, the particles of which exhibit a mean size ranging from 5-15 microns and a specific surface per unit of weight ranging from 600 to 800 m²/g.
- Use will also be made of the aerogel sold under the name Enova® Aerogel MT
- 10 1100 (INCI name: Silica silylate) by Cabot, the particles of which exhibit a mean size ranging from 2-25 microns and a specific surface per unit of weight ranging from 600 to 800 m²/g.

- The hydrophobic aerogel particles represent from 0.1% to 30% by weight,
- 15 preferably from 0.5% to 20% by weight, better still from 1% to 10% by weight and more preferably from 1.5% to 5% by weight, with respect to the total weight of the composition.

Ethers of polyols and of polyalkylene glycols

20

The ethers of polyol and of polyalkylene glycols are of formula (I):



in which:

- Z represents a radical obtained by removal of one or more hydroxyl
- 25 groups from a compound comprising from 3 to 9 hydroxyl groups;
- AO represents an oxyalkylene group comprising from 3 to 4 carbon atoms;
- EO represents an oxyethylene group;
- BO represents an oxyalkylene group comprising 4 carbon atoms;
- 30 a ranges from 3 to 9;
- l, m and n respectively represent the mean number of moles of AO, EO and BO units and $1 \leq l \leq 50$, $1 \leq m \leq 50$ and $0.5 \leq n \leq 5$;
- the ratio by weight of AO to EO (AO/EO) ranging from 1/5 to 5/1.

- 35 Use may be made, in the composition according to the invention, of one oxyalkylenated derivative or of a mixture of identical or different oxyalkylenated derivatives.

- In the oxyalkylenated derivative of formula (I), Z represents a radical obtained by removal of one or more hydroxyl groups from a compound comprising from 3
- 40 to 9 hydroxyl groups, and a represents the number of hydroxyl groups of the derivative and ranges from 3 to 9.

Mention may be made, as compounds comprising from 3 to 9 hydroxyl groups, for example, in the case where $a = 3$: of glycerol or trimethylolpropane; in the case where $a = 4$: of erythritol, pentaerythritol, sorbitol, alkylglycosides or diglycerol; in the case where $a = 5$: of xylitol; in the case where $a = 6$: of
5 dipentaerythritol, sorbitol or inositol; in the case where $a = 8$: of sucrose or trehalose; in the case where $a = 9$: of maltitol; or of a mixture of the said compounds.

Preferably, Z represents a radical obtained by removal of hydroxyl group(s) from a compound comprising from 3 to 9 hydroxyl groups, and $3 \leq a \leq 6$.
10 Mention may be made, as preferred compounds comprising from 3 to 9 hydroxyl groups, of glycerol or trimethylolpropane and in particular of glycerol.

When a is less than or equal to 2, the compatibility between the oxyalkylenated compound and the fatty phase of the composition, such as oils and fatty substances, is low and the stability of the mixture in oil-based formulations is
15 affected.

When a is greater than or equal to 10, a tacky effect is observed.

AO represents an oxyalkylene group comprising from 3 to 4 carbon atoms. AO can, for example, represent an oxypropylene group, an oxybutylene (oxy-n-butylene, oxyisobutylene or oxy-t-butylene) group, an oxytrimethylene group, an
20 oxytetramethylene group or a mixture. AO is preferably chosen from oxypropylene and/or oxybutylene groups and more preferably from oxypropylene groups.

l represents the mean number of moles of AO units and $1 \leq l \leq 50$, preferably $2 \leq l \leq 20$.

25 m represents the mean number of moles of EO units and $1 \leq m \leq 50$, preferably $2 \leq m \leq 20$.

The order of addition of the AO and EO units is not decisive; the AO and EO units can be added randomly or in sequenced form (blocks). In order to obtain an improved effect of prevention of skin dryness, AO and EO are preferably
30 added randomly.

BO represents an oxyalkylene group comprising 4 carbon atoms and can, for example, be chosen from oxybutylene (such as oxy-n-butylene, oxy-isobutylene or oxy-t-butylene) or oxytetramethylene groups, and their mixtures. Preferably, BO is chosen from oxybutylene groups.

35 n represents the mean number of moles of BO units and $0.5 \leq n \leq 5$, preferably $0.8 \leq n \leq 3$ and better still $1 \leq n \leq 3$.

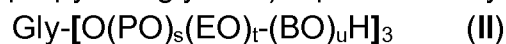
When n is less than 0.5, a tacky effect is observed. When n exceeds 5, the moisturizing effect decreases.

In the formula (I), the $(BO)_n$ units are necessarily bonded to the terminal
40 hydrogen atom of the oxyalkylenated derivative.

The oxyalkylenated derivatives of formula (I) can be prepared by well-known methods, such as, for example, by addition polymerization of ethylene oxide and alkylene oxide comprising from 3 to 4 carbon atoms with a compound comprising from 3 to 9 hydroxyl groups, followed by reaction with an alkylene oxide comprising 4 carbon atoms.

During the addition polymerization of ethylene oxide and alkylene oxide comprising from 3 to 4 carbon atoms with a compound comprising from 3 to 9 hydroxyl groups, the ethylene oxide and alkylene oxide groups can be polymerized randomly or in the form of blocks.

Mention may in particular be made, among the oxyalkylenated derivatives of formula (I), of the oxyalkylenated derivative (polyoxybutylene polyoxyethylene polyoxypropylene glycerol) represented by the following formula (II):



in which:

Gly represents a radical obtained by removal of hydroxyl groups from glycerol;

PO represents an oxypropylene group;

EO represents an oxyethylene group;

s and t respectively represent the mean number of moles of PO and EO units and have a value ranging from 1 to 50;

the ratio by weight of PO to EO units (PO/EO) ranges from 1/5 to 5/1;

BO represents an oxyalkylene group comprising 4 carbon atoms; and

u represents the mean number of moles of BO units and ranges from 0.5 to 5.

The oxyalkylenated derivative of formula (II) above can be obtained by the addition polymerization of propylene oxide and ethylene oxide with glycerol, in a ratio of 3 to 150 molar equivalents of each propylene oxide and ethylene oxide with respect to the glycerol, followed by the addition of alkylene oxide comprising 4 carbon atoms in a ratio of 1.5 to 15 molar equivalents with respect to the glycerol.

The addition reaction of the said alkylene oxide with glycerol can be carried out in the presence of an alkaline catalyst, of a phase-transfer catalyst, of a Lewis acid catalyst, or an equivalent. Use is generally made of an alkaline catalyst, preferably potassium hydroxide.

Preference is given, among the oxyalkylenated derivatives of formula (I) or (II), to the derivatives obtained by addition of 6 to 10 mol of ethylene oxide and 3 to 7 mol of propylene oxide to glycerol, followed by the addition of 2 to 4 mol of butylene oxide.

Mention may be made, as preferred oxyalkylenated derivative of formula (I) or (II), of polyoxybutylene polyoxyethylene polyoxypropylene glycerol, which is

obtained by an addition reaction of 8 mol of ethylene oxide and 5 mol of propylene oxide with glycerol, followed by the addition of 3 mol of butylene oxide, the INCI name of which is PEG/PPG/polybutylene glycol-8/5/3 glycerin. PEG/PPG/polybutylene glycol-8/5/3 glycerin is commercially available under the
5 reference Wilbride S-753 from NOF Corporation.

The oxyalkylenated derivative(s) of formula (I) can be present in the composition according to the invention in a content ranging from 0.1% to 20% by weight, preferably from 0.5% to 15% by weight and better still from 1% to
10 10% by weight, with respect to the total weight of the composition.

The ethers of polyol and of polyalkylene glycols according to the invention are present in a content ranging from 0.1% to 20% by weight, preferably ranging from 0.2% to 10% by weight and very preferentially ranging from 0.5% to 5% by
15 weight, with respect to the total weight of the composition.

Preferably, the compositions according to the invention additionally comprise at least one C₂-C₈ polyol. Mention may be made, among the polyols, of glycerol, 1,2-propanediol, 1,3-propanediol, 1,4-butanediol, 1,3-butanediol, 1,2-butanediol,
20 1,5-pentanediol, 1,2-pentanediol, 1,6-hexanediol or 1,2-octanediol (caprylyl glycol).

The preferred polyols according to the invention are in particular glycerol, 1,3-butanediol, 1,2-propanediol (propylene glycol), 1,2-pentanediol and 1,3-
25 propanediol.

When they are present, the diols according to the invention are present in a content ranging from 0.01% to 30% by weight, preferably ranging from 0.1% to 20% by weight and very preferentially ranging from 0.5% to 10% by weight, with
30 respect to the total weight of the composition.

Preferably, the compositions according to the invention additionally comprise a sebum-absorbing particle, in particular a particle having a sebum uptake.

35 Advantageously, the sebum-absorbing particles have a sebum uptake of greater than or equal to 10 ml/100 g, in particular of greater than or equal to 20 ml/100 g and especially of greater than or equal to 30 ml/100 g.

The term "sebum-absorbing particle" is understood to mean a powder capable of absorbing and/or adsorbing sebum. Generally, this type of particle is provided in the form of a powder formed of particles having a sebum uptake.

The sebum uptake corresponds to the amount of sebum absorbed and/or adsorbed by the particle. It is measured according to the wet point method described below.

Advantageously, the sebum-absorbing particle can have a BET specific surface of greater than or equal to $200 \text{ m}^2/\text{g}$, preferably of greater than $350 \text{ m}^2/\text{g}$ and preferentially of greater than $500 \text{ m}^2/\text{g}$, and in particular of less than $2000 \text{ m}^2/\text{g}$.

The BET specific surface is determined according to the BET (Brunauer-Emmett-Teller) method described in The Journal of the American Chemical Society, Vol. 60, page 309, February 1938, and corresponding to International Standard ISO 5794/1 (appendix D). The BET specific surface corresponds to the total specific surface (thus including micropores) of the particle and in particular of the powder.

The sebum-absorbing particles can be a mineral powder or an organic powder. More specifically, the sebum-absorbing particles can be chosen from:

- silica powders,
- polyamide (Nylon[®]) powders,
- silica silylate powders,
- powders formed of acrylic polymers, in particular polymethyl methacrylate, poly(methyl methacrylate/ethylene glycol dimethacrylate), poly(allyl methacrylate/ethylene glycol dimethacrylate) or ethylene glycol dimethacrylate/lauryl methacrylate copolymer powders,
- powders formed of expanded copolymer of vinylidene chloride and acrylonitrile or of vinylidene chloride, acrylonitrile and methyl methacrylate,
- powders formed of silicone elastomer, obtained in particular by polymerization of organopolysiloxane having at least two hydrogen atoms each bonded to a silicon atom and of an organopolysiloxane comprising at least two ethylenically unsaturated groups (in particular two vinyl groups) in the presence of a platinum catalyst,
- talc,
- boron nitride,
- clays,
- perlites,
- their mixture.

The sebum-absorbing particle can be a powder coated with a hydrophobic treatment agent.

- 5 The hydrophobic treatment agent can be chosen from fatty acids, such as stearic acid; metal soaps, such as aluminium dimyristate or the aluminium salt of hydrogenated tallow glutamate; amino acids; N-acylamino acids or their salts; lecithin; isopropyl triisostearyl titanate; waxes and their mixtures.
- 10 The N-acylamino acids can comprise an acyl group having from 8 to 22 carbon atoms, such as, for example, a 2-ethylhexanoyl, caproyl, lauroyl, myristoyl, palmitoyl, stearoyl or cocoyl group. The salts of these compounds can be aluminium, magnesium, calcium, zirconium, zinc, sodium or potassium salts. The amino acid can, for example, be lysine, glutamic acid or alanine.
- 15 The term "alkyl" mentioned in the compounds cited above denotes in particular an alkyl group having from 1 to 30 carbon atoms and preferably having from 5 to 16 carbon atoms.

- 20 Mention may very particularly be made, by way of representation and without implied limitation of sebum-absorbing particles according to the invention, of the particles below.

Mention may be made, as silica powder, of:

- the porous silica microspheres sold under the name Silica Beads SB-700 by Miyoshi or Sunsphere[®] H51 or Sunsphere[®] H33 by Asahi Glass;
- 25 - the polydimethylsiloxane-coated amorphous silica microspheres sold under the name SA Sunsphere[®] H33 or SA Sunsphere[®] H53 by Asahi Glass;
- precipitated silica microspheres, for example coated with mineral wax, such as polyethylene, and sold in particular under the name Acematt OK 412 by
- 30 Evonik Degussa.

Mention may be made, as nylon powder, of the nylon powder sold under the name Orgasol[®] 4000 by Atochem.

- 35 Mention may be made, as powder formed of acrylic polymers, of:
- the polymethyl methacrylate powders sold under the name Covabead[®] LH85 by Wackherr;
 - the poly(methyl methacrylate/ethylene glycol dimethacrylate) powders sold under the name Dow Corning 5640 Microsponge[®] Skin Oil Adsorber by Dow
 - 40 Corning or Ganzpearl[®] GMP-0820 by Ganz Chemical;

- the poly(allyl methacrylate/ethylene glycol dimethacrylate) powders sold under the name Poly-Pore[®] L200 or Poly-Pore[®] E200 by Amcol Health and Beauty Solutions Inc.;
 - the ethylene glycol dimethacrylate/lauryl methacrylate copolymer powders sold
- 5 under the name Polytrap[®] 6603 from Dow Corning.

Mention may be made, as silicone elastomer powder, of the powders sold under the names Trefil[®] Powder E-505C and Trefil[®] Powder E-506C by Dow Corning.

- 10 Mention may in particular be made, as silica silylate powders, of those sold under the name Dow Corning VM-2270 Aerogel Fine Particles by Dow Corning (oil uptake equal to 10.40 ml/g).

- 15 Mention may be made, as powders formed of expanded copolymer of vinylidene chloride and acrylonitrile or of vinylidene chloride, acrylonitrile and methyl methacrylate, of the microspheres formed of expanded terpolymer of vinylidene chloride, acrylonitrile and methyl methacrylate sold under the brand name Expancel by Nobel Casco and in particular under the references 551 DE 12 (particle size D(0.5) of approximately 12 μm and density of approximately 40
- 20 kg/m^3), 551 DE 20 (particle size D(0.5) of approximately 15 to 25 μm and density of approximately 60 kg/m^3), 551 DE 50 (particle size D(0.5) of approximately 40 μm), 461 DE 50 and 642 WE 50, with a particle size D(0.5) of approximately 50 μm , and 551 DE 80 (particle size D(0.5) of approximately 50 to 80 μm).

- 25 It is also possible to use particles of this same expanded terpolymer having a particle size D(0.5) of approximately 18 μm and a density of approximately 60 to 80 kg/m^3 (Expancel EL23) or with a particle size D(0.5) of approximately 34 μm and a density of approximately 20 kg/m^3 .

- 30 Mention may also be made of the Expancel particles 551 DE 40 d42 (particle size D(0.5) of approximately 30 to 50 μm and density of approximately 42 kg/m^3), 551 DE 80 d42 (particle size D(0.5) of approximately 50 to 80 μm and density of approximately 42 kg/m^3), 461 DE 20 d70 (particle size D(0.5) of approximately 15 to 25 μm and density of approximately 70 kg/m^3), 461 DE 40 d25 (particle size D(0.5) of approximately 35 to 55 μm and density of approximately 25 kg/m^3), 461 DE 40 d60 (particle size D(0.5) of approximately 20 to 40 μm and density of approximately 60 kg/m^3), 461 DET 40 d25 (particle size D(0.5) of approximately 35 to 55 μm and density of approximately 25 kg/m^3), 051 DE 40 d60 (particle size D(0.5) of approximately 20 to 40 μm and density of approximately 60 kg/m^3), 091 DE 40 d30 (particle size D(0.5) of approximately 35 to 55 μm and density of approximately 30 kg/m^3) or 091 DE
- 40

80 d30 (particle size D(0.5) of approximately 60 to 90 μm and density of approximately 30 kg/m^3).

It is also possible to use particles of a polymer of vinylidene chloride and acrylonitrile or of vinylidene chloride, acrylonitrile and methyl methacrylate in unexpanded form, such as those sold under the brand name Expancel with the reference 551 DU 10 (particle size D(0.5) of approximately 10 μm) or 461 DU 15 (particle size D(0.5) of approximately 15 μm).

The sebum-absorbing particles which are particularly preferred are silica powders, in particular precipitated silica powders and more particularly wax-coated precipitated silicas, and expanded copolymers of vinylidene chloride and acrylonitrile or of vinylidene chloride, acrylonitrile and methyl methacrylate.

Preferably, the particles exhibit a number-average size of between 50 nm and 350 microns, better still between 100 nm and 100 microns and more preferentially still between 0.5 and 100 microns.

The sebum-absorbing particles can be present in the composition according to the invention in a content ranging from 0.01% to 30% by weight, preferably ranging from 0.1% to 20% by weight and very preferentially ranging from 0.5% to 10% by weight, with respect to the total weight of the composition.

Method for measuring the sebum uptake of a powder:

The sebum uptake of a powder is measured according to the method for determining the oil uptake of a powder described in Standard NF T 30-022. It corresponds to the amount of sebum adsorbed onto the available surface of the powder by measurement of the wet point.

An amount w (in grams) of powder of between approximately 0.5 g and 5 g (the amount depends on the density of the powder) is placed on a glass plate and then artificial sebum having the following composition is added dropwise:

- triolein	29%
- oleic acid	28.5%
- oleyl oleate	18.5%
- squalene	14%
- cholesterol	7%
- cholesteryl palmitate	3%

After addition of 4 to 5 drops of artificial sebum, the artificial sebum is incorporated in the powder using a spatula and the addition of the artificial

sebum is continued until conglomerates of artificial sebum and of powder are formed. From this point, the artificial sebum is added at the rate of one drop at a time and the mixture is subsequently triturated with the spatula. The addition of artificial sebum is stopped when a firm and smooth paste is obtained. This
5 paste must be able to be spread over the glass plate without cracks or the formation of lumps. The volume V_s (expressed in ml) of artificial sebum used is then noted.

10 The sebum uptake corresponds to the ratio V_s/w .

The composition according to the invention can be cosmetic and/or dermatological, preferably cosmetic.

15 The composition according to the invention is generally suitable for topical application to the skin and thus generally comprises a physiologically acceptable medium, that is to say a medium which is compatible with the skin and/or its superficial body growths. It is preferably a cosmetically acceptable medium, that is to say a medium which exhibits a pleasant colour, a pleasant
20 odour and a pleasant feel and which does not cause any unacceptable discomfort (stinging, tightness or redness) liable to dissuade the consumer from using this composition.

The composition according to the invention can be provided in any formulation
25 form conventionally used for a topical application and in particular in the form of dispersions of the lotion or gel type, of emulsions having a liquid or semi-liquid consistency of the milk type, obtained by dispersing a fatty phase in an aqueous phase (O/W) or vice versa (W/O), or of suspensions or emulsions having a soft, semi-solid or solid consistency of the cream or gel type, or also of multiple
30 emulsions (W/O/W or O/W/O), of microemulsions, of vesicular dispersions of ionic and/or non-ionic type, or of wax/aqueous phase dispersions. These compositions are prepared according to the usual methods.

In addition, the compositions used according to the invention can be more or less fluid and can have the appearance of a white or coloured cream, an
35 ointment, a milk, a lotion or a serum. They can optionally be applied to the skin in the form of an aerosol.

The viscosity of the compositions according to the invention generally varies from 20 mPa.s to 20 Pa.s and preferably from 100 mPa.s to 2 Pa.s. This
40 viscosity is measured at 25°C using a Rheomat 180 viscometer.

When the composition used according to the invention comprises an oily phase, it preferably comprises at least one oil. It can additionally comprise other fatty substances.

- 5 Mention may be made, as oils which can be used in the composition of the invention, for example, of:
- hydrocarbon oils of animal origin, such as perhydrosqualene;
 - hydrocarbon oils of vegetable origin, such as liquid triglycerides of fatty acids comprising from 4 to 10 carbon atoms, for instance heptanoic or octanoic acid
 - 10 triglycerides, or also, for example, sunflower oil, maize oil, soybean oil, gourd oil, grape seed oil, sesame seed oil, hazelnut oil, apricot oil, macadamia oil, arara oil, castor oil, avocado oil, caprylic/capric acid triglycerides, such as those sold by Stearineries Dubois or those sold under the names Miglyol 810, 812 and 818 by Dynamit Nobel, jojoba oil or shea butter oil;
 - 15 - synthetic esters and ethers, in particular of fatty acids, such as the oils of formulae R_1COOR_2 and R_1OR_2 , in which R_1 represents the residue of a fatty acid comprising from 8 to 29 carbon atoms and R_2 represents a branched or unbranched hydrocarbon chain comprising from 3 to 30 carbon atoms, such as Purcellin oil, isononyl isononanoate, isopropyl myristate, 2-ethylhexyl palmitate,
 - 20 2-octyldodecyl stearate, 2-octyldodecyl erucate or isostearyl isostearate; hydroxylated esters, such as isostearyl lactate, octyl hydroxystearate, octyldodecyl hydroxystearate, diisostearyl malate or triisocetyl citrate; fatty alcohol heptanoates, octanoates or decanoates; polyol esters, such as propylene glycol dioctanoate, neopentyl glycol diheptanoate and diethylene
 - 25 glycol diisononanoate; and pentaerythritol esters, such as pentaerythrityl tetraisostearate;
 - linear or branched hydrocarbons of mineral or synthetic origin, such as liquid paraffins, which are volatile or non-volatile, and their derivatives, petrolatum, polydecenes or hydrogenated polyisobutene, such as Parleam oil;
 - 30 - fatty alcohols having from 8 to 26 carbon atoms, such as cetyl alcohol, stearyl alcohol and their mixture (cetearyl alcohol), octyldodecanol, 2-butyloctanol, 2-hexyldecanol, 2-undecylpentadecanol, oleyl alcohol or linoleyl alcohol;
 - partially hydrocarbon-based and/or silicone-based fluoro oils, such as those described in the document JP-A-2-295 912;
 - 35 - silicone oils, such as volatile or non-volatile polymethylsiloxanes (PDMSs) with a linear or cyclic silicone chain, which are liquid or pasty at ambient temperature, in particular cyclopolydimethylsiloxanes (cyclomethicones), such as cyclohexasiloxane; polydimethylsiloxanes comprising alkyl, alkoxy or phenyl groups, which are pendent or at the end of the silicone chain, which groups
 - 40 have from 2 to 24 carbon atoms; or phenylated silicones, such as phenyl trimethicones, phenyl dimethicones, phenyl(trimethylsiloxy)diphenylsiloxanes,

diphenyl dimethicones, diphenyl(methyldiphenyl)trisiloxanes, (2-phenylethyl)trimethylsiloxysilicates and polymethylphenylsiloxanes;
- their mixtures.

- 5 In the list of the abovementioned oils, the term "hydrocarbon oil" is understood to mean any oil predominantly comprising carbon and hydrogen atoms, and optionally ester, ether, fluoro, carboxylic acid and/or alcohol groups.

10 The other fatty substances which can be present in the oily phase are, for example, fatty acids comprising from 8 to 30 carbon atoms, such as stearic acid, lauric acid, palmitic acid and oleic acid; waxes, such as lanolin wax, beeswax, carnauba wax or candelilla wax, paraffin wax, lignite wax or microcrystalline waxes, ceresin or ozokerite, or synthetic waxes, such as polyethylene waxes or Fischer-Tropsch waxes; silicone resins, such as
15 trifluoromethyl-C₁₋₄-alkyl dimethicone and trifluoropropyl dimethicone; and silicone elastomers, such as the products sold under the KSG name by Shin-Etsu, under the Trefil, BY29 or EPSX names by Dow Corning or under the Gransil name by Grant Industries.

- 20 These fatty substances can be chosen in a manner varied by a person skilled in the art in order to prepare a composition having the desired properties, for example of consistency or texture.

25 According to a specific embodiment of the invention, the composition according to the invention is a water-in-oil (W/O) or oil-in-water (O/W) emulsion, preferably an O/W emulsion.

30 The O/W emulsion also comprises emulsified gels. The term "emulsified gels" is understood to mean dispersions of oils in an aqueous gel. The addition of surfactant is optional for this formulation form.

35 The proportion of the oily phase of the emulsion can range from 2% to 80% by weight and preferably from 5% to 50% by weight, with respect to the total weight of the composition.

40 The emulsions generally comprise at least one emulsifier chosen from amphoteric, anionic, cationic or non-ionic emulsifiers, used alone or as a mixture, and optionally a co-emulsifier. The emulsifiers are appropriately chosen according to the emulsion to be obtained (W/O or O/W). The emulsifier and the co-emulsifier are generally present in the composition in a proportion ranging

from 0.3% to 30% by weight and preferably from 0.5% to 20% by weight, with respect to the total weight of the composition.

Mention may be made, for the W/O emulsions, for example, as emulsifiers, of
5 dimethicone copolyols, such as the mixture of cyclomethicone and dimethicone
copolyol sold under the name DC 5225 C by Dow Corning, and alkyl
dimethicone copolyols, such as the lauryl dimethicone copolyol sold under the
name Dow Corning 5200 Formulation Aid by Dow Corning and the cetyl
dimethicone copolyol sold under the name Abil EM 90® by Goldschmidt. Use
10 may also be made, as surfactant for W/O emulsions, of a solid crosslinked
organopolysiloxane elastomer comprising at least one oxyalkylenated group,
such as those obtained according to the procedure of Examples 3, 4 and 8 of
the document US-A-5 412 004 and of the examples of the document US-A-5
811 487, in particular the product of Example 3 (synthesis example) of Patent
15 US-A-5 412 004, and such as the product sold under the reference KSG 21 by
Shin-Etsu.

Mention may be made, for the O/W emulsions, for example, as emulsifiers, of
non-ionic emulsifiers, such as oxyalkylenated (more particularly
20 polyoxyethylenated) esters of fatty acids and of glycerol; oxyalkylenated esters
of fatty acids and of sorbitan; oxyalkylenated (oxyethylenated and/or
oxypropylenated) esters of fatty acids; oxyalkylenated (oxyethylenated and/or
oxypropylenated) ethers of fatty alcohols; sugar esters, such as sucrose
stearate; and their mixtures, such as the mixture of glyceryl stearate and PEG-
25 40 stearate.

The composition can be an aqueous gel and can in particular comprise
common aqueous gelling agents.

30 The composition according to the invention advantageously comprises an
aqueous phase comprising water and optionally glycols, ethanol and/or
hydrophilic adjuvants, which may be water-soluble at ambient temperature.
The proportion of the aqueous phase of the compositions can range from 20%
to 95% by weight and preferably from 60% to 90% by weight, with respect to the
35 total weight of the composition.

Advantageously, the composition according to the invention has a pH ranging
from 3 to 9. Preferably, the pH of the composition ranges from 4 to 8.

The composition according to the invention can be a composition for caring for, cleansing or making up the skin of the body or face, in particular a care composition.

5 The composition for caring for the skin can, for example, be a cream, a gel or a fluid for the face.

The composition for making up the skin can, for example, be a foundation, an eye shadow, a blusher, a concealer or a product for making up the body.

Additives:

10

The composition according to the present invention can additionally comprise various adjuvants commonly used in the cosmetics field, such as emulsifiers; fillers; preservatives; sequestering agents; colorants; fragrances; thickeners and gelling agents, in particular acrylamide homo- and copolymers, acrylic homo-
15 and copolymers and acrylamidomethylpropanesulfonic acid (AMPS®) homo- and copolymers; or organic or inorganic UV-screening agents (such as the Silica (and) Titanium Dioxide Sunsil TIN 50 metapigments).

20 Advantageously, in order to reinforce the mattifying effects of the composition according to the invention, it additionally comprises at least one active agent for caring for greasy skin. This active agent is preferentially chosen from desquamating agents, antimicrobial agents, anti-inflammatory agents, sebum regulators and antioxidants.

25 It can also comprise cosmetic active agents other than those for caring for greasy skin, such as, for example, moisturizing agents and vitamins.

30 Of course, a person skilled in the art will take care to choose this or these optional additional compound(s) and/or their amounts so that the advantageous properties of the composition according to the invention are not, or not substantially, detrimentally affected by the envisaged addition.

Active agent for caring for greasy skin

35 In the context of the present invention, the expression "active agent for caring for greasy skin" is understood to mean a compound which intrinsically, that is to say not requiring the intervention of an external agent in order to activate it, has a biological activity which can in particular be:

- a desquamating activity (which allows the comedones to open), and/or
- 40 - an antimicrobial activity (in particular on *P. acnes*), and/or
- an anti-inflammatory activity, and/or

- a sebum-regulating activity, and/or
 - an antioxidant activity (which prevents squalene from being oxidized and comedones from being formed).
- 5 The active agent for caring for greasy skin may thus be chosen from: desquamating agents and/or antimicrobial agents and/or anti-inflammatory agents and/or sebum regulators and/or antioxidants.

1. Desquamating agents

10

The term "desquamating agent" is understood to mean any compound capable of acting:

- either directly on desquamation by promoting exfoliation, such as β -hydroxy acids, in particular salicylic acid and its derivatives (including 5-(n-octanoyl)salicylic acid); α -hydroxy acids, such as glycolic acid, citric acid, lactic acid, tartaric acid, malic acid or mandelic acid; urea; gentisic acid; oligofucoses; cinnamic acid; *Saphora japonica* extract; resveratrol and certain jasmonic acid derivatives;

20

- or on the enzymes involved in desquamation or decomposition of the corneodesmosomes, such as glycosidases, stratum corneum chymotryptic enzyme (SCCE) or indeed even other proteases (trypsin, chymotrypsin-like). Mention may be made of aminosulfonic compounds and in particular N-(2-hydroxyethyl)piperazine-N'-2-ethanesulfonic acid (HEPES); 2-oxothiazolidine-4-carboxylic acid (procysteine) derivatives; derivatives of α -amino acids of glycine type (such as described in EP-0 852 949, and also sodium methyl glycine diacetate, sold by BASF under the trade name Trilon M); honey; or sugar derivatives, such as O-octanoyl-6-D-maltose and N-acetylglucosamine.

30

5-(n-Octanoyl)salicylic acid is preferred for use in the present invention.

2. Antimicrobial agents

- 35 The antimicrobial agents capable of being used in the composition according to the invention can be chosen in particular from 2,4,4'-trichloro-2'-hydroxydiphenyl ether (or triclosan), 3,4,4'-trichlorocarbanilide, phenoxyethanol, phenoxypropanol, phenoxyisopropanol, hexamidine isethionate, metronidazole and its salts, miconazole and its salts, itraconazole, terconazole, econazole, ketoconazole, saperconazole, fluconazole, clotrimazole, butoconazole, oxiconazole, sulfaconazole, sulconazole, terbinafine, ciclopirox, ciclopirox
- 40

- olamine, undecylenic acid and its salts, benzoyl peroxide, 3-hydroxybenzoic acid, 4-hydroxybenzoic acid, phytic acid, N-acetyl-L-cysteine, lipoic acid, azelaic acid and its salts, arachidonic acid, resorcinol, 2,4,4'-trichloro-2'-hydroxydiphenyl ether, 3,4,4'-trichlorocarbanilide, octopirox, octoxyglycerin, 5 octanoylglycine, caprylyl glycol, 10-hydroxy-2-decanoic acid, dichlorophenyl imidazole dioxolane and its derivatives described in Patent WO 93/18743, copper pidolate, salicylic acid, zinc salicylate, iodopropynyl butylcarbamate, farnesol, phytosphingosines and their mixtures.
- 10 The preferred antimicrobial agents are octoxyglycerin, copper pidolate, zinc salicylate, salicylic acid and iodopropynyl butylcarbamate.

3. Anti-inflammatory agents

- 15 Mention may be made, as anti-inflammatory or soothing agents which can be used in the composition according to the invention, of pentacyclic triterpenes and extracts of plants (e.g.: *Glycyrrhiza glabra*) comprising same, such as β -glycyrrhetic acid and its salts and/or its derivatives (glycyrrhetic acid monoglucuronide, stearyl glycyrrhetinate, 3-(stearoyloxy)glycyrrhetic acid), 20 ursolic acid and its salts, oleanolic acid and its salts, betulinic acid and its salts, bisabolol, an extract of *Paeonia suffruticosa* and/or *lactiflora*, salicylic acid salts and in particular zinc salicylate, phycosaccharides from Codif, an extract of *Laminaria saccharina*, canola oil, bisabolol and extracts of camomile, allantoin, Sepivital EPC (phosphoric diester of vitamins E and C) from SEPPIC, ω -3 25 unsaturated oils, such as musk rose oil, blackcurrant oil, ecchium oil or fish oil, plankton extracts, capryloyl glycine, Seppicalm VG (sodium palmitoylproline and *Nymphaea alba*) from SEPPIC, an extract of *Pygeum*, an extract of *Boswellia serrata*, an extract of *Centipeda cunninghami*, an extract of *Helianthus annuus*, an extract of *Linum usitatissimum*, tocotrienols, extracts of *Cola nitida*, extracts 30 of *Centella asiatica*, piperonal, an extract of clove, an extract of *Epilobium angustifolium*, aloe vera, an extract of *Bacopa monieri*, phytosterols, niacinamide, cortisone, hydrocortisone, indomethacin and betamethasone.

- The preferred anti-inflammatory agents for use in the present invention are 35 extracts of *Centella asiatica*, β -glycyrrhetic acid and its salts, α -bisabolol and niacinamide.

4. Sebum regulators

When the composition according to the invention comprises a sebum regulator, such as a 5 α -reductase inhibitor, this agent can be chosen in particular from:

- 5
- retinoids, in particular retinol;
 - sulfur and sulfur derivatives;
 - zinc salts, such as zinc lactate, gluconate, pidolate, carboxylate, salicylate and/or cysteate;
 - 10 - selenium chloride;
 - vitamin B6 or pyridoxine;
 - the mixture of capryloyl glycine, sarcosine and extract of *Cinnamomum zeylanicum* sold in particular by SEPPIC under the trade name Sepicontrol A5[®];
 - an extract of *Laminaria saccharina* sold in particular by SECMA under the
 - 15 trade name Phlorogine[®];
 - an extract of *Spiraea ulmaria* sold in particular by Silab under the trade name Sebonormine[®];
 - extracts of plants of the species *Arnica montana*, *Cinchona succirubra*, *Eugenia caryophyllata*, *Humulus lupulus*, *Hypericum perforatum*, *Mentha piperita*, *Rosmarinus officinalis*, *Salvia officinalis* and *Thymus vulgaris*, all sold,
 - 20 for example, by Maruzen;
 - an extract of *Serenoa repens* sold in particular by Euromed;
 - extracts of plants of the genus *Silybum*;
 - plant extracts comprising sapogenins and in particular extracts of
 - 25 *Dioscoreae* plants rich in diosgenin; and
 - extracts of *Eugenia caryophyllata* comprising eugenol and eugenyl glucoside.

Zinc salts are preferred for use in the present invention.

30

5. Antioxidants

The antioxidants which are preferred for use in the present invention can be chosen from tocopherol and its esters, such as tocopheryl acetate, BHT and

35 BHA.

The active agent(s) used in the composition according to the invention can represent from 0.01% to 50%, preferably from 0.1% to 25% and better still from 0.5% to 10% of the total weight of the composition.

40

The invention concerns also a cosmetic method for caring for and/or making up the skin, comprising the topical application, to the skin, of the composition according to the invention.

- 5 More specifically, it is a method for making the skin matt and/or for reducing its shininess.

The term "to mattify" is understood to mean to make the skin more matt and to reduce its shininess and thus its unsightly reflections.

- 10 The invention also relates to the cosmetic use of the composition according to the invention for caring for combination skin and/or greasy skin.

The invention will now be illustrated by the following non-limiting examples. In these examples, the amounts are shown as percentages by weight. As the case
15 may be, the compounds are cited as chemical names or as CTFA (International Cosmetic Ingredient Dictionary and Handbook) names.

EXAMPLES

20

Example 1:

A cream in the form of an oil/water emulsion for caring for the face was prepared, which cream has the following composition:

25

In % AM	
Isopropyl N-lauroylsarcosinate (Eldew SL 205 from Ajinomoto)	2
Silica Silylate (VM-2270 Aerogel Fine Particles from Dow Corning)	1
PEG/PPG/polybutylene glycol-8/5/3 (Wilbride S-753 from NOF Corporation)	1
PEG-60 Hydrogenated Castor Oil (Eumulgin HRE 60 from Cognis)	1
Dimethicone (and) Dimethiconol (Xiameter PMX-1503 Fluid from Dow Corning)	2
Ammonium Polyacryldimethyltauramide (Hostacerin AMPS® from Clariant)	0.4
Phenoxyethanol	0.5
Butylene glycol	6
Xanthan gum	0.15

Water q.s. for	100
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This composition is fluid and stable. The silica aerogel particles are finely dispersed.

- 5 This composition can be applied in the morning and/or evening to the face to make combination skin and greasy skin matt.

Example 2:

10

A cream in the form of an oil/water emulsion for caring for the face was prepared, which cream has the following composition:

In % AM	A	B
Isopropyl N-lauroylsarcosinate (Eldew SL 205 from Ajinomoto)	2	2
Silica Silylate (VM-2270 Aerogel Fine Particles from Dow Corning)	0.5	0.5
Polyoxybutylene polyoxyethylene polyoxypropylene glycerol (Wilbride S-753 from NOF Corporation)	2	
Ammonium Polyacryldimethyltauramide (Hostacerin AMPS® from Clariant)	0.6	0.6
Phenoxyethanol	0.5	0.5
Glycerol	3	3
Ethanol	6	6
Salicylic acid	0.5	0.5
Triethanolamine	0.65	0.65
Xanthan gum	0.15	0.15
Water q.s. for	100	100

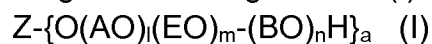
- 15 A very uniform aerogel dispersion which is stable (microscopically and over time) and an improvement in the mattness, in comparison with the same formula without Wilbride S-753 (comp B), are obtained.

20 This example shows that the presence of an oxyalkylenated derivative according to the invention makes it possible to limit the appearance of the phenomenon of pilling of the composition after application to the skin.

CLAIMS

1. Cosmetic and/or dermatological composition comprising, in a physiologically acceptable medium:

a) at least hydrophobic aerogel particles and b) at least one ether of polyol and of polyalkylene glycols having the following formula (I):



in which:

10 Z represents a radical obtained by removal of one or more hydroxyl groups from a compound comprising from 3 to 9 hydroxyl groups;
AO represents an oxyalkylene group comprising from 3 to 4 carbon atoms;

EO represents an oxyethylene group;

15 BO represents an oxyalkylene group comprising 4 carbon atoms;
a ranges from 3 to 9;

l, m and n respectively represent the mean number of moles of AO, EO and BO units and $1 \leq l \leq 50$, $1 \leq m \leq 50$ and $0.5 \leq n \leq 5$;

the ratio by weight of AO to EO (AO/EO) ranging from 1/5 to 5/1.

20

2. Composition according to Claim 1, where the hydrophobic aerogel particles exhibit a specific surface per unit of weight ranging from 200 to 1500 m²/g and a size, expressed as volume-average diameter (D[0.5]), of less than 1500 µm.

25 3. Composition according to Claim 1 or 2, where the hydrophobic aerogel particles exhibit a specific surface per unit of weight ranging from 600 to 1200 m²/g and better still from 600 to 800 m²/g.

30 4. Composition according to any one of Claims 1 to 3, where the hydrophobic aerogel particles exhibit a size, expressed as volume-average diameter, ranging from 5 to 25 µm and better still from 5 to 20 µm.

35 5. Composition according to any one of Claims 1 to 3, where the hydrophobic aerogel particles exhibit a packed density ranging from 0.02 g/cm³ to 0.10 g/cm³ and preferably from 0.03 g/cm³ to 0.08 g/cm³.

40 6. Composition according to any one of Claims 1 to 5, where the hydrophobic aerogel particles exhibit a specific surface per unit of volume ranging from 5 to 60 m²/cm³, preferably from 10 to 50 m²/cm³ and better still from 15 to 40 m²/cm³.

7. Composition according to any one of Claims 1 to 6, where the hydrophobic aerogel particles have an oil absorption capacity, measured at the wet point, ranging from 5 to 18 ml/g, preferably from 6 to 15 ml/g and better still from 8 to 12 ml/g of particles.
8. Composition according to any one of Claims 1 to 7, where the hydrophobic aerogel particles are organic, inorganic or organic-inorganic hybrid particles.
9. Composition according to any one of Claims 1 to 8, where the hydrophobic aerogel particles are hydrophobic silica aerogel particles, preferably silica silylate aerogel particles and more particularly trimethylsilylated silica aerogel particles.
10. Composition according to any one of the preceding claims, characterized in that the hydrophobic aerogel particles represent from 0.1% to 30% by weight, preferably from 0.5% to 20% by weight, better still from 1% to 10% by weight and more preferably from 1.5% to 5% by weight, with respect to the total weight of the composition.
11. Composition according to any one of the preceding claims, characterized in that the said ether of polyol and of polyalkylene glycols is chosen from the compounds of following formula (II):
- $$\text{Gly}-[\text{O}(\text{PO})_s(\text{EO})_t(\text{BO})_u\text{H}]_3 \quad (\text{II})$$
- in which:
- Gly represents a radical obtained by removal of hydroxyl groups from glycerol;
- PO represents an oxypropylene group;
- EO represents an oxyethylene group;
- s and t respectively represent the mean number of moles of PO and EO units and have a value ranging from 1 to 50;
- the ratio by weight of PO to EO units (PO/EO) ranges from 1/5 to 5/1;
- BO represents an oxyalkylene group comprising 4 carbon atoms; and
- u represents the mean number of moles of BO units and ranges from 0.5 to 5.
12. Composition according to any one of the preceding claims, characterized in that the ether of polyol and of polyalkylene glycols is chosen from the copolymer of polyoxybutylene polyoxyethylene polyoxypropylene and of glycerol (INCI name: PEG/PPG/polybutylene glycol-8/5/3 glycerin).

5 **13.** Composition according to any one of the preceding claims, characterized in that the ether of polyol and of polyalkylene glycols is present in a content ranging from 0.1% to 20% by weight, preferably from 0.2% to 10% by weight and better still from 0.5% to 5% by weight, with respect to the total weight of the composition.

10 **14.** Composition according to any one of the preceding claims, characterized in that the composition additionally comprises a C₂-C₈ diol.

15 **15.** Composition according to any one of the preceding claims, characterized in that the composition additionally comprises a sebum-absorbing particle.

20 **16.** Composition according to any one of the preceding claims, characterized in that it additionally comprises at least one active agent for caring for greasy skin chosen from desquamating agents, antimicrobial agents, anti-inflammatory agents, sebum regulators and antioxidants.

25 **17.** Cosmetic method for caring for and/or making up the skin, comprising the topical application, to the skin, of the composition according to one of Claims 1 to 16.

30 **18.** Method according to Claim 18, characterized in that it is a method for making the skin matt and/or for reducing its shininess.

35 **19.** Cosmetic use of the composition according to any one of Claims 1 to 16 for caring for combination skin and/or greasy skin.