(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
20 November 2014 (20.11.2014)

WIPO | PCT

(10) International Publication Number
WO 2014/185539 A1

(51) International Patent Classification:
A61K 8/25 (2006.01) *A61K 8/04* (2006.01)
A61K 8/26 (2006.01) *A61K 8/19* (2006.01)
A61Q 1/02 (2006.01)

(21) International Application Number:
PCT/JP2014/063133

(22) International Filing Date:
9 May 2014 (09.05.2014)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2013-102127 14 May 2013 (14.05.2013) JP

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

(72) Inventors; and
(71) Applicants *(for AL only)*: **KAMIDOI Yuka** [JP/JP]; KSP R&D-B1113, 3-2-1, Sakado, Takatsu-ku, Kawasaki-shi, Kanagawa 213-0012 (JP). **KAWAMOTO Makoto** [JP/JP]; KSP R&D-B1113, 3-2-1, Sakado, Takatsu-ku, Kawasaki-shi, Kanagawa 213-0012 (JP). **LEBRE-LEMONNIER Caroline** [FR/JP]; KSP R&D-B1113, 3-2-1, Sakado, Takatsu-ku, Kawasaki-shi, Kanagawa 213-0012 (JP).

(74) Agents: **MURAYAMA Yasuhiko** et al.; 1-9-2, Marunouchi, Chiyoda-ku, Tokyo 1006620 (JP).

(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, BN, 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, IR, IS, JP, KE, KG, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

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

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

WO 2014/185539 A1

(54) Title: COSMETIC COMPOSITION

(57) Abstract: The present invention relates to a cosmetic composition comprising (a) a pulverulent phase; and (b) an aqueous phase, wherein the viscosity of the composition is 2,500 mPa s or less, preferably 1,000 mPa-s or less, and more preferably 800 mPa-s or less; the pulverulent phase comprises at least one powder in an more than 1% by weight relative to the total weight of the composition selected from the group consisting of perlite, aluminum chlorohydrate, porous silica, amorphous hollow silica, silica silylate and magnesium carbonate. The cosmetic composition according to the present invention can be a uniform aqueous powder dispersion, when being used, and can realize both a fresh sensation upon use and long-lasting cosmetic effects.

DESCRIPTION

COSMETIC COMPOSITION

TECHNICAL FIELD

The present invention relates to a cosmetic composition comprising a pulverulent phase and an aqueous phase, wherein the pulverulent phase comprises a powder which can be uniformly distributed in the composition by, for example, shaking the composition.

BACKGROUND ART

Heretofore, various types of cosmetic compositions have been used for making up the skin, in particular the face. For example, a foundation in the form of a W/O or O/W emulsion has been used. A foundation in the form of a W/O emulsion can provide good lasting effects but may not provide a fresh sensation. On the other hand, a foundation in the form of an O/W emulsion can provide a fresh sensation, but may not provide good lasting effects. Thus, it has been difficult for a cosmetic composition in the form of an emulsion to establish both good lasting effects and a fresh sensation upon use.

Conventionally, another cosmetic composition in the form of an aqueous powder dispersion including powder and water, such as what is called "Mizu-Oshiroi" in Japan, has also been used for making up the skin, in particular the face. When not in use, this type of cosmetic composition is separated into two phases of an aqueous phase and a powder phase. When being used, this cosmetic composition may be shaken by, for example, the hands to uniformly disperse the powder phase into the aqueous phase. Since thus formed aqueous powder dispersion includes a continuous aqueous phase including water, it gives fresh sensation to the skin during use.

However, the aqueous powder dispersion normally comprises no or only a small amount of oil, and therefore, it is sometimes difficult to give long-lasting cosmetic effects to the skin, in particular long-lasting makeup effects on the face, and especially for skins having an increased sebum excretion during the day (mixed or greasy skins) and skins exposed to extreme temperature and/or humidity conditions, as it is the case in ASEAN. One of the possibilities to improve the long-lasting effects may be the addition of oil to the aqueous powder dispersion. However, the addition of oil would give an oil layer to the cosmetic composition. When not in use, this oil layer may impair the aesthetic appearance of the cosmetic composition in the form of two layers of the aqueous and powder phases. In addition, if the cosmetic composition contains oil, it may be difficult to form a uniform powder dispersion during use even by shaking the cosmetic composition thoroughly. The addition of a surfactant may help in uniformly dispersing the oil into the aqueous powder dispersion. However, this will result in the formation of an O/W emulsion, and therefore, the provision of long-lasting cosmetic effects to the skin, in particular the face, would not be realized. Furthermore, the addition of a surfactant may cause undesirable irritations on the skin.

DISCLOSURE OF INVENTION

One of the objectives of the present invention is to provide a cosmetic composition essentially composed of an aqueous phase and a pulverulent phase, which can be an aqueous powder

dispersion, and can realize both fresh sensation during use and long-lasting cosmetic effects such as matte effect and shine control, even in extreme conditions of temperature and/or humidity, even if the cosmetic composition contains no or only a small amount of oil or surfactant.

Here 'essentially' means that the composition of the invention contains more than 98% by weight in total of aqueous phase and a pulverulent phase, preferably more than 99% by weight, and more preferably 100% by weight in total of aqueous phase and a pulverulent phase.

The above objective of the present invention can be attained by a cosmetic composition, comprising
(a) a pulverulent phase; and
(b) an aqueous phase,
wherein
the viscosity of the composition is 2,500 mPa·s or less, preferably 1,000 mPa·s or less, and more preferably 800 mPa·s or less, and
the pulverulent phase comprises at least one powder in an amount more than 1% by weight relative to the total weight of the composition selected from the group consisting of perlite, aluminum chlorohydrate, porous silica, amorphous hollow silica, silica silylate and magnesium carbonate.

In a preferred embodiment, the pulverulent phase comprises perlite. In another preferred embodiment, the pulverulent phase comprises perlite and silica silylate.

It is preferable that the powder have a particle size distribution such that the median particle size of the powder is smaller than 30 μm, preferably smaller than 25 μm, more preferably smaller than 20 μm, and even more preferably smaller than 15 μm.

It is also preferable that the powder have a particle size distribution such that 90% of the powder particles are smaller than 55 μm, preferably smaller than 50 μm, and more preferably smaller than 45 μm.

The amount of the powder may be 2% by weight or more, preferably 3% by weight or more, and more preferably 5% by weight or more, even more preferably 10% or more, and most preferably 15% or more, relative to the total weight of the composition.

The pulverulent phase in the cosmetic composition according to the present invention may comprise at least one additional filler and/or pigment.

The additional filler may be selected from the group consisting of talc, kaolin, mica, solid silica, sericite, calcinated talc, calcinated mica, calcinated sericite, synthetic mica, bismuth oxychloride, barium sulfate, boron nitride, calcium carbonate, magnesium hydrogen carbonate, and hydroxyapatite. In a preferred embodiment, the additional filler is calcium carbonate.

The pigment may be selected from the group consisting of titanium dioxide, zirconium oxide, cerium oxide, zinc oxide, iron oxide (black, yellow or red), chromium oxide, manganese violet, ultramarine blue, chromium hydrate, ferric blue, and metal powders, preferably from titanium oxide, iron oxide and mixture thereof.

The amount of the pulverulent phase in the cosmetic composition according to the present invention may be 3 to 40% by weight, preferably 5 to 35% by weight, and more preferably 10 to 30% by weight, relative to the total weight of the composition.

The aqueous phase in the cosmetic composition according to the present invention may comprise at least one hydrophilic organic solvent.

The amount of the aqueous phase in the cosmetic composition according to the present invention may be 30 to 97% by weight, preferably 35 to 85% by weight, and more preferably 40 to 75% by weight, relative to the total weight of the composition.

The cosmetic composition according to the present invention may comprise at least one oil in an amount of less than 1% by weight relative to the total weight of the composition. In a preferred embodiment, the composition does not contain any oil.

The cosmetic composition according to the present invention may comprise at least one surfactant or gelling agent in an amount of less than 1% by weight relative to the total weight of the composition. In a preferred embodiment, the composition does not contain any surfactant.

The present invention also relates to a cosmetic process for making up, in particular, matting or reducing glittering (such as shininess) of the skin, comprising
applying the cosmetic composition according to the present invention.

The composition may be shaken in the container to re-suspend the powders, just before application.

BEST MODE FOR CARRYING OUT THE INVENTION

After diligent research, the inventors have discovered that it is possible to achieve the above objective by providing a cosmetic composition, especially for the skin, in particular the face, which is composed essentially of an aqueous phase and a pulverulent phase, which can be an aqueous powder dispersion when being used, and can realize both a fresh sensation upon use and long-lasting cosmetic effects, even in extreme conditions of temperature and/or humidity even if the cosmetic composition contains no or only a small amount of oil or surfactant, by introducing at least one selected specific powder into the pulverulent phase.

Thus, the present invention relates to a cosmetic composition, comprising:
(a) a pulverulent phase; and
(b) an aqueous phase,
wherein
the viscosity of the composition is 2,500 mPa·s or less, preferably 1,000 mPa·s or less, and more preferably 800 mPa·s or less,
the pulverulent phase comprises at least one powder in an amount of more than 1% by weight relative to the total weight of the composition, selected from the group consisting of perlite, aluminum chlorohydrate, porous silica, amorphous hollow silica, silica silylate, and magnesium carbonate.

The cosmetic composition according to the present invention can simultaneously provide both

a fresh sensation due to the water in the aqueous phase and long-lasting cosmetic effects such as matte effect even in extreme conditions of temperature and/or humidity due to the selected specific powder(s) in the pulverulent phase.

Hereinafter, the cosmetic composition according to the present invention will be explained in a more detailed manner.

[Cosmetic Composition]

The cosmetic composition according to the present invention comprises
(a) a pulverulent phase, and
(b) an aqueous phase.

When not in use, the pulverulent and aqueous phases in the cosmetic composition according to the present invention form two distinct phases, and typically form two layers, in which the pulverulent phase layer is precipitated under the aqueous phase layer.

When being used, the cosmetic composition according to the present invention may be shaken by, for example, the hands to form an aqueous powder dispersion which is preferably a uniform dispersion of powder in the aqueous continuous phase.

In a preferred embodiment, the cosmetic composition according to the present invention is shaken by the hands to form an aqueous powder dispersion before application on the skin.

The pulverulent phase in the cosmetic composition according to the present invention comprises at least one powder selected from the group consisting of perlite, aluminum chlorohydrate, porous silica, amorphous hollow silica, silica silylate and magnesium carbonate. A combination of the selected powders may be used. In a preferred embodiment, the cosmetic composition contains at least perlite.

As the porous silica or amorphous hollow silica, mention may be made of:
- porous silica microspheres, especially those sold under the names Sunsphere® H53 and Sunsphere® H33 (oil uptake equal to 3.70 ml/g) by the company Asahi Glass; MSS-500-3H by the company Kobo;
- polydimethylsiloxane-coated amorphous silica microspheres, especially those sold under the name SA Sunsphere® H33 (oil uptake equal to 2.43 ml/g);
- silica silylate powders, especially those sold under the name Dow Corning VM-2270 Aerogel Fine Particles by the company Dow Corning (oil uptake equal to 10.40 ml/g);
- amorphous hollow silica particles, especially those sold under the name Silica Shells by the company Kobo (oil uptake equal to 5.50 ml/g); and
- precipitated silica powders surface-treated with a mineral wax, such as precipitated silica treated with a polyethylene wax, and especially those sold under the name Acematt OR 412 by the company Evonik-Degussa (oil uptake equal to 3.98 ml/g).

As the magnesium carbonate, mention may be made of:
- the product sold under the name Tipo Carbomagel by the company Buschle & Lepper (oil uptake equal to 2.14 ml/g).

It is preferable that the powder to be included in the pulverulent phase be perlite. The perlite particles which can be used in the present invention may include those which are

commercially available from the company WORLD MINERALS under the trade name Optimat 2550 OR, 2040 OR, and 1430 OR (oil uptake equal to 2.4 ml/g).

In a particular embodiment, the cosmetic composition contains at least perlite and silica silylate powders.

The particle of the above selected specific powder may have a porous or hollow structure, and therefore, it can effectively absorb water or an oily substance such as sebum. Therefore, the above selected specific powder can impart long-lasting cosmetic effects, in particular long-lasting make-up effects such as matte effects, against water such as sweat and an oily substance such as sebum.

It is preferable in view of the feeling upon use and the like that the above selected specific powder have a relatively small particle size. Thus, it is preferable that the powder have a particle size distribution such that the median particle size of the powder is smaller than 30 μm, preferably smaller than 25 μm, more preferably smaller than 20 μm, and even more preferably smaller than 15 μm. Here, "median particle size of the powder is smaller than 25 μm" means that 50% of the powder particles have a particle size of smaller than 25 μm. The particle size can be measured by a laser diffraction method, and this particle size is based on a volume diameter.

It is also preferable in view of the feeling to use and the like that the above selected specific powder have a relatively narrow particle size distribution. Thus, it is preferable that the powder have a particle size distribution such that 90% of the powder particles are smaller than 55 μm, preferably smaller than 50 μm, and more preferably smaller than 45 μm.

The amount of the above-selected specific powder in the pulverulent phase is not limited specifically. The amount of the powder may be 2% by weight or more, preferably 3% by weight or more, more preferably 5% by weight or more, even more preferably 10% by weight or more, and most preferably 15% by weight or more, relative to the total weight of the composition. As the amount of the above selected specific powder increases, it is possible to give better cosmetic effects, in particular more long-lasting make-up effects such as more long-lasting matte effects. Furthermore, it is possible to quickly evaporate water just after applying the cosmetic composition according to the present invention to the skin, in particular the face, and therefore, the time required for the cosmetic process using the cosmetic composition according to the present invention can be shortened. However, in consideration of the feeling to touch provided by the above-selected specific powder, it would be preferable that the amount of the above-selected specific powder be in a range from more than 1.0% to 25% by weight, more preferably from 2% to 20% by weight, and even more preferably from 5% to 15% by weight, relative to the total weight of the cosmetic composition according the present invention.

The pulverulent phase in the cosmetic composition according to the present invention may comprise at least one additional filler and/or at least one pigment, other than the above selected specific powder.

The term "filler" should be understood to mean a colorless or white, inorganic or synthetic particle which is insoluble in a possible liquid component in the cosmetic composition according to the present invention, regardless of the temperature at which the composition is manufactured.

The additional filler(s) can be inorganic or organic, and can be of spherical or oblong shape, regardless of the crystallographic form (for example, sheet, cubic, hexagonal, orthorhombic, and the like). Non-limiting mention may be made of talc, kaolin, mica, solid silica, sericite, calcinated talc, calcinated mica, calcinated sericite, synthetic mica, bismuth oxychloride, barium sulfate, boron nitride, calcium carbonate, magnesium hydrogen carbonate and hydroxyapatite, powders formed of polyamide (Nylon®), of poly-β-alanine and of polyethylene, powders formed of polyurethane, powders formed of tetrafluoroethylene polymers (Teflon®), lauryllysine, starch, polymeric hollow microspheres, such as those of poly(vinylidene chloride)/acrylonitrile, for example Expancel® (Nobel Industrie), or of acrylic acid copolymers, silicone resin microbeads (Tospearls® from Toshiba, for example), particles formed of polyorganosiloxane elastomers, or metal soaps derived from organic carboxylic acids having from 8 to 22 carbon atoms, such as from 12 to 18 carbon atoms, for example zinc stearate, magnesium stearate, lithium stearate, zinc laurate or magnesium myristate.

As the polyamide powder, mention maybe made of the product sold under the name Pomp610 by the company UBE Industries (oil uptake equal to 2.02 ml/g).

As the polymeric hollow microspheres, mention may also be made of:

- porous polymethyl methacrylate/ethylene glycol dimethacrylate spheres sold under the name Microsponge 5640 by the company Cardinal Health Technologies (oil uptake equal to 1.55 ml/g); and
- ethylene glycol dimethacrylate/lauryl methacrylate copolymer powders, especially those sold under the name Polytrap® 6603 from the company Dow Corning (oil uptake equal to 6.56 ml/g).

It is preferable that the additional filler be an inorganic filler. Thus, the additional filler may be selected from the group consisting of talc, kaolin, mica, solid silica, sericite, calcinated talc, calcinated mica, calcinated sericite, synthetic mica, bismuth oxychloride, barium sulfate, boron nitride, calcium carbonate, magnesium carbonate, and hydroxyapatite. The use of mica and/or calcium carbonate as the additional filler(s) is preferable.
It is preferable that the pulverulent phase contain perlite and the additional filler be calcium carbonate.

An additional filler that is suitable for the present invention may be, for example, a filler whose mean particle size is less than 100 μm, and especially between 1 and 50 μm, for example between 4 to 20 μm. The mean (median) particle size can be measured by a laser diffraction method, and this particle size is based on a volume diameter.

The additional filler can be present in the pulverulent phase in an amount ranging from 1% to 30% by weight, relative to the total weight of the cosmetic composition according to the present invention. In one embodiment, the additional fillers can be present in an amount ranging from 3% to 20% by weight relative to the total weight of the composition. In a further embodiment of the present invention, the additional fillers can be present in an amount ranging from 5% to 10% by weight relative to the total weight of the composition.

The term "pigments" should be understood to mean white or colored, inorganic or organic particles of any shape which are insoluble in the physiological medium and which are intended to color the composition.

Among inorganic pigments that may be used according to the present invention, non-limiting mention may be made of titanium dioxide, optionally surface treated, zirconium or cerium oxides, as well as zinc, (black, yellow or red) iron or chromium oxides, manganese violet, ultramarine blue, chromium hydrate and ferric blue, or metal powders, such as aluminum powder or copper powder. In a preferred embodiment, the composition comprises titanium oxides, iron oxides or mixture thereof.

Among organic pigments that may be used according to the present invention, further non-limiting mention may be made of carbon black, pigments of D&C type and lakes based on cochineal carmine and on barium, strontium, calcium or aluminum.

It is also possible to use at least one goniochromatic pigment. This pigment exhibits a relatively large color change according to the angle of observation.

The goniochromatic pigment may be chosen, for example, from pigments of multilayer interference structure and liquid-crystal pigments.

In the case of a multilayer structure, this structure may comprise, for example, at least two layers, each layer, independently of the other layer(s) or otherwise, being made, for example, from at least one material chosen from the following materials: MgF_2, CeF_3, ZnS, ZnSe, Si, SiO_2, Ge, Te, Fe_2O_3, Pt, Va, Al_2O_3, MgO, Y_2O_3, S_2O_3, SiO, HfO_2, ZrO_2, CeO_2, Nb_2O_5, Ta_2O_5, TiO_2, Ag, Al, Au, Cu, Rb, Ti, Ta, W, Zn, MoS_2, cryolite, alloys and polymers.

The multilayer structures that may be used in the goniochromatic pigments are, for example, the following structures: $Al/SiO_2/Al/SiO_2/Al$; $Cr/MgF_2/Al/MgF_2/Al$; $MoS_2/SiO_2/Al/SiO_2/MoS_2$; $Fe_2O_3/SiO_2/Al/SiO_2/Fe_2O_3$; $Fe_2O_3/SiO_2/Fe_2O_3/SiO_2/Fe_2O_3$; $MoS_2/SiO_2/$mica-oxide$/SiO_2/MoS_2$; and $Fe_2O_3/SiO_2/$mica-oxide$/SiO_2/Fe_2O_3$. Different colors may be obtained depending on the thickness of the various layers. Thus, with the structure $Fe_2O_3/SiO_2/Al/SiO_2/Fe_2O_3$, the color changes from green-golden to red-gray for SiO_2 layers ranging from 320 to 350 nm; from red to golden for SiO_2 layers ranging from 380 to 400 nm; from violet to green for SiO_2 layers ranging from 410 to 420 nm; and from copper to red for SiO_2 layers ranging from 430 to 440 nm.

Consequently, the multilayer structure may be mineral or organic. Different colors are obtained depending on the thickness of each of the various layers.

The goniochromatic pigments of multilayer interference structure disclosed herein are, for example, those described in the following documents: USP-3438796, EP-A-227423, USP-5135812, EP-A-170439, EP-A-341002, USP-4930866, USP-5641719, EP-A-472371, EP-A-395410, EP-A-753545, EP-A-768343, EP-A-571836, EP-A-708154, EP-A-579091, USP-5411586, USP-5364467, WO 97/39066, DE-A-4225031, WO 95/17479, DE-A-19614637, and combinations thereof. They may be in the form of flakes of metallized color.

In one embodiment, the goniochromatic pigment of multilayer interference structure may be chosen from the following commercial goniochromatic pigments: Infinite Colors from the company Shiseido, Sicopearl Fantastico from BASF, Colorstream, Xirallic or Xirona from Merck, and Colorglitter from Flex.

As goniochromatic pigments of multilayer structure, mention may be made of those sold under the name "Sicopearl".

It is also possible to use at least one liquid-crystal pigment which is, for example, described in patent application EP-A-1046 692.

Liquid-crystal particles that may be used include, for example, those known under the CTFA name Polyacrylate-4 and sold under the names "Helicone® HC Sapphire", "Helicone® HC Scarabeus", "Helicone® HC Jade", "Helicone® HC Maple", "Helicone® HC XL Sapphire", "Helicone® HC XL Scarabeus", "Helicone® HC XL Jade" and "Helicone® HC XL Maple" by the company Wacker.

It is also possible to use at least one nacreous pigment. The term "nacreous pigment" should be understood to mean an iridescent particle of any shape, for example, produced in the shell of certain molluscs or alternatively synthesized.

The nacreous pigment(s) may be chosen from white nacreous pigments such as mica coated with titanium or with bismuth oxychloride, colored nacreous pigments such as titanium mica coated with iron oxides, titanium mica coated, for example, with ferric blue or with chromium oxide, titanium mica coated with an organic pigment of the abovementioned type, and also nacreous pigments based on bismuth oxychloride.

The pigment can be present in the pulverulent phase in the cosmetic composition according to the present invention in an amount ranging from 1% to 30% by weight, relative to the total weight of the composition. In one embodiment, the pigments can be present in an amount ranging from 3% to 20% by weight relative to the total weight of the composition. In a further embodiment, the pigments can be present in an amount ranging from 5% to 10% by weight relative to the total weight of the composition.

It is preferable that at least one additional filler and/or at least one pigment in the cosmetic composition according to the present invention have been preferably surface treated with a hydrophilic or hydrophobic substance.

The amount of the pulverulent phase in the cosmetic composition according to the present invention is more than 1% by weight relative to the total weight of the composition, and may be 3 to 40% by weight, preferably 5 to 35% by weight, and more preferably 10 to 30% by weight, relative to the total weight of the composition.

The aqueous phase in the cosmetic composition according to the present invention may comprise at least one hydrophilic organic solvent.

The hydrophilic organic solvent is preferably water-miscible. As the hydrophilic organic solvent, there may be mentioned, for example, C_1-C_4 alkanols, such as ethanol and isopropanol; polyols and polyolethers such as glycerol, 2-butoxyethanol, propylene glycol, monomethylether of propylene glycol, monoethylether and monomethylether of diethyleneglycol; and aromatic alcohols such as benzylalcohol and phenoxyethanol; analogous products; and mixtures thereof.

The organic solvents may be present in an amount ranging from 1 to 40% by weight, preferably from 5 to 30% by weight, and more preferably from 10 to 20% by weight, relative

to the total weight of the cosmetic composition according to the present invention.

The amount of water in the aqueous phase in the cosmetic composition according to the present invention may be 30 to 65% by weight, preferably 35 to 60% by weight, and more preferably 40 to 55% by weight, relative to the total weight of the composition.

The pH of the water in the aqueous phase in the cosmetic composition according to the present invention is not limited, but may be preferable in a range from 4.0 to 8.0, more preferably 5.0 to 7.5 and even more preferably 6.0 to 7.0.

The amount of the aqueous phase in the cosmetic composition according to the present invention may be 30 to 97% by weight, preferably 35 to 80% by weight, and more preferably 40 to 75% by weight, relative to the total weight of the composition.

The cosmetic composition according to the present invention has a viscosity of 2,500 mPa·s or less, preferably 1,000 mPa·s or less, more preferably 800 mPa·s or less, more preferably 600 mPa·s or less, more preferably 400 mPa·s or less, and even more preferably 200 mPa·s or less.

The cosmetic composition according to the present invention may have a viscosity of 0.8 mPa·s or more, preferably 1.0 mPa·s or more, more preferably 1.5 mPa·s or more, more preferably 2.0 mPa·s or more, more preferably 3.0 mPa·s or more, and even more preferably 5.0 mPa·s or more.

The viscosity can be measured at 25°C, using a conventional viscometer, for example, Rheomat RM180 viscometer (marketed by ProReo) equipped with, for example, a No. 2 spindle, just after, for example, 1-10 minutes after mixing the cosmetic composition according to the present invention to form a uniform aqueous powder dispersion.

The low viscosity of the cosmetic composition according to the present invention means that the cosmetic composition according to the present invention includes no or only a small amount of oil, surfactant or gelling agent.

In one embodiment according to the present invention, the cosmetic composition according to the present invention may comprise at least one oil in an amount of less than 1% by weight, preferably less than 0.1% by weight, and more preferably less than 0.01% by weight, relative to the total weight of the composition. It is most preferable that the cosmetic composition according to the present invention is free from any oil.

The term "oil" here means a fatty substance which is in the form of a liquid at 25°C under normal pressure.

If present, the oil may be selected from the group consisting of oils of animal or plant origin, mineral oils, synthetic oils such as ester oils other than animal or plant oils and artificial triglycerides, silicone oils and hydrocarbons, in particular aliphatic hydrocarbons. These oils may be volatile or non-volatile. Two or more oils may be used in combination. Thus, a single type of oil or a combination of different type of oils may be used.

In another embodiment according to the present invention, the cosmetic composition according to the present invention may comprise at least one surfactant or at least one gelling

agent in an amount of less than 1% by weight, preferably less than 0.1% by weight, and more preferably less than 0.01% by weight, relative to the total weight of the composition. It is most preferable that the cosmetic composition according to the present invention is free from any surfactant or gelling agent.

If present, the surfactant used in the present invention may be selected from the group consisting of anionic surfactants, amphoteric surfactants, cationic surfactants and nonionic surfactants. Two or more surfactants may be used in combination. Thus, a single type of surfactant or a combination of different type of surfactants may be used. Preferably, according to the present invention, the "surfactant" is capable of forming foam with water without additives.

The presence of a gelling agent in the cosmetic composition according to the present invention results in an increase in the viscosity of the composition, and tends to provide a less fresh sensation due to the fluidity of the aqueous phase including water. Therefore, it is preferable that the cosmetic composition according to the present invention includes no or only a small amount of a gelling agent.

If present, however, the gelling agent used in the present invention may be selected from hydrophilic gelling agents. Two or more hydrophilic gelling agents may be used in combination. Thus, a single type of hydrophilic gelling agent or a combination of different type of hydrophilic gelling agents may be used. The hydrophilic gelling agent can thicken the aqueous phase of the cosmetic composition according to the present invention.

The hydrophilic gelling agent can be chosen, for example, from:

(i) carboxyvinyl polymers;
(ii) polyacrylamides and polymers and copolymers of 2-acrylamido-2-methylpropanesulphonic acid which are optionally crosslinked and/or neutralized;
(iii) polysaccharides, such as xanthan gums, guar gums, alginates or cellulose polymers; and
(iv) inorganic compounds.

The cosmetic composition according to the present invention can comprise any other conventional cosmetic ingredients which can be chosen, for example, from antioxidants, fragrances, preservatives, neutralizing agents, sunscreens, vitamins, moisturizing agents, self-tanning compounds and anti-wrinkle active principles.

Of course, a person skilled in the art will choose this or these optional additional ingredient(s) and/or the amount(s) thereof such that the beneficial properties of the cosmetic composition according to the present invention are not, or not substantially, detrimentally affected by the envisaged addition.

The cosmetic composition according to the present invention can be prepared by, for example, mixing the ingredients of the pulverulent phase (the above selected specific powder, the additional filler, the additional pigment and the like) and by then adding the ingredient(s) of the aqueous phase, with stirring, the mixture subsequently being poured into a container, if necessary.

[Cosmetic Process]

Another aspect of the present invention is a cosmetic process for making up, in particular, matting, or reducing glittering (such as shininess) of the skin, comprising applying the cosmetic composition according to the present invention.

It is not limited how to apply the cosmetic composition according to the present invention to the skin, in particular the face, of a user. It is preferable that the cosmetic composition according to the present invention be applied by using an appropriate applicator such as that explained above.

The cosmetic composition according to the present invention applied onto the skin may be subjected to a step of drying.

It is also not limited how to dry the cosmetic composition according to the present invention applied onto the skin, in particular the face, of a user. It is possible to use a drier which produces warm or cold wind, or a fan. Of course, it is possible to leave the cosmetic composition according to the present invention on the skin after application, because the body temperature may be sufficient to dry the aqueous phase of the cosmetic composition according to the present invention, depending on the amount of the cosmetic composition according to the present invention applied onto the skin.

The cosmetic process according to the present invention can be used for making up the skin, in particular the face, by applying the cosmetic composition according to the present invention as explained above to the skin. According to the cosmetic process according to the present invention, it is possible to provide a user with both a fresh sensation and long-lasting cosmetic effects such as long-lasting makeup effects. Thus, the matte appearance of the skin, in particular good appearance of the face with reduced glittering, can last for a long period of time.

EXAMPLES

The present invention will be described in a more detailed manner by way of examples. However, they should not be construed as limiting the scope of the present invention.

Examples 1-3

[Preparations]

The following cosmetic compositions according to Examples 1-3, shown in Table 1, were prepared by mixing the components shown in Table 1. The numerical values for the amounts of the components shown in the Tables are all based on "% by weight" as active raw materials.

[Evaluations]

(Viscosity)

The viscosity of each of the compositions according to Examples 1-3 was measured at 25°C, using a Rheomat RM180 viscometer (marketed by ProReo) equipped with a No. 2 spindle depending of the viscosity. The measurement was performed after 10 minutes of rotation of

the spindle in the composition, at a shear rate of 200 rpm. The measured viscosity values of the compositions according to Examples 1-3 are shown in Table 1.

(Sensorial Evaluation)

Professional five panels evaluated the compositions prepared in Examples 1-3, scoring the fresh feeling upon use in accordance with the following criteria.

1: very oily
2: oily
3: between oily and fresh
4: fresh
5: very fresh

The average score by the panels for each of Examples 1-3 is shown in Table 1.

(Matte Effects)

Each of the compositions according to Examples 1-3 was applied onto the face of a panelist. Immediately after the application of each composition to the face, the net gloss (reflected light) on the face was measured by a polarimetric camera.

30 minutes after the application, the net gloss on the face was again measured in the same manner as above to determine the gloss on the face.

The difference between the net gloss immediately after the application (T_0) and 30 minutes after the application (T_{30}) was determined as a matte value (T_{30}-T_0). The above process was performed for 12 professional panels respectively, and the average of the matte value was calculated. The results are shown in Table 1.

Lower matte value indicates that the cosmetic composition possesses longer-lasting matte effects. A matte value of less than 9.5 is preferable, more preferably less than 9.0 and further preferably less than 8.0.

[Results]

It was surprisingly found that Examples 1-3 provided not only good long-lasting matte effects, but also a fresh feeling upon use.

Table 1

	Example 1	Example 2	Example 3
Titanium oxide	7.0770	7.4000	7.4000
Iron oxides	1.3272	1.4000	1.4000
Perlite	2.8800	10.000	15.000
Mica	4.0000	4.0000	4.0000
Aluminum chlorohydrate	1.0000	-	-
Kaolin	3.0000	-	-
Phenoxyethanol	adequate amount	adequate amount	adequate amount
Glycerin	20.0000	20.0000	20.0000
Ethanol	10.0000	10.0000	10.0000
Water	q.s. 100	q.s. 100	q.s. 100
Viscosity (mPa·s)	28	111	63
Sensorial Evaluation (Fresh feeling)	5	4.8	4.4
Matte Value (T_{30}-T_0)	9.71	7.00	6.39

Comparative Example

Matte effects, as explained above for Examples 1 to 3, of a product sold under the name Hahagiku Mizu-oshiroi (distributed by Ishizawa Laboratories) allegedly containing water, butylene glycol, glycerine, titanium oxide, kaolin, iron oxide, chamomilla extract, and methylparaben, and Example 3 (including 15% perlite) were compared in extreme conditions (37 °C and 60% humidity). The results are shown in below.

	Comparative Example	Example 3 (15% perlite)
Matte Value (T_{30}-T_0)	9.9	6.39

From this result, we concluded that the composition of the invention containing perlite shows better performance in term of matte effect even in extreme condition (temperature and/or humidity) than Hahagiku Mizu-oshiroi containing kaolin in the pulverluent phase.

Examples 4-7

[Preparations]

The following compositions according to Examples 4-7 shown in Table 2, were prepared by mixing the components shown in Table 2. The numerical values for the amounts of the components shown in the Tables are all based on "% by weight" as active raw materials.

[Evaluations]

Each composition (Examples 4-7) was applied to panelist's face (cheek), and matte effect was examined by two panelists. The compositions were found to have comparable effect to that of the composition according to Example 1.

Table 2

	Example 4	Example 5	Example 6	Example 7
Titanium oxide	7.4000	7.4000	7.4000	7.4000
Iron oxides	1.4000	1.4000	1.4000	1.4000
Silica silylate (DOW CORNING VM-2270 AEROGEL FINE PARTICLES)	0.5000	-	-	-
Amorphous hollow silica	-	3.0000	-	-
Magnesium carbonate	-	-	3.0000	-
Mica	-	4.0000	4.0000	4.0000
Perlite	15.000	-	-	3.0000
Phenoxyethanol	adequate amount	adequate amount	adequate amount	adequate amount
Glycerin	-	-	-	20.0000
Ethanol	-	-	-	10.0000
Water	q.s. 100	q.s. 100	q.s. 100	q.s. 100
Result of matte effect evaluation	Comparable to Example 1	Comparable to Example 1	Comparable to Example 1	Comparable to Example 1

Example 5 shows that a combination of perlite and silica silylate provides even better performance in terms of matte effect. Examples 6 and 7 show good results with amorphous hollow silica, and magnesium carbonate, respectively.

CLAIMS

1. A cosmetic composition, comprising:
(a) a pulverulent phase; and
(b) an aqueous phase,
wherein
the viscosity of the composition is 2,500 mPa·s or less, preferably 1,000 mPa·s or less, and more preferably 800 mPa·s or less,
the pulverulent phase comprises at least one powder in an amount of more than 1% by weight relative to the total weight of the composition, selected from the group consisting of perlite, aluminum chlorohydrate, porous silica, amorphous hollow silica, silica silylate and magnesium carbonate.

2. The cosmetic composition according to claim 1, wherein the powder is perlite.

3. The cosmetic composition according to Claim 1 or 2, wherein the powder has a particle size distribution such that the median particle size of the powder is smaller than 30 μm, preferably smaller than 25 μm, more preferably smaller than 20 μm, and even more preferably smaller than 15 μm.

4. The cosmetic composition according to Claim 1 to 3, wherein the powder has a particle size distribution such that 90% of the powder particles are smaller than 55 μm, preferably smaller than 50 μm, and more preferably smaller than 45 μm.

5. The cosmetic composition according to any one of Claims 1 to 4, wherein the amount of the powder is 2% by weight or more, preferably 3% by weight or more, more preferably 5% by weight or more, even more preferably 10% or more, and most preferably 15% or more, relative to the total weight of the composition.

6. The cosmetic composition according to any one of Claims 1 to 5, wherein the pulverulent phase comprises at least one additional filler and/or pigment.

7. The cosmetic composition according to Claim 6, wherein the additional filler is selected from the group consisting of talc, kaolin, mica, solid silica, sericite, calcinated talc, calcinated mica, calcinated sericite, synthetic mica, bismuth oxychloride, barium sulfate, boron nitride, calcium carbonate and hydroxyapatite, preferably calcium carbonate.

8. The cosmetic composition according to any one of Claim 6, wherein the pigment is selected from the group consisting of titanium dioxide, zirconium oxide, cerium oxide, zinc oxide, iron oxide (black, yellow or red), chromium oxide, manganese violet, ultramarine blue, chromium hydrate, ferric blue, and metal powders, preferably from titanium oxide, iron oxide and mixture thereof.

9. The cosmetic composition according to any one of Claims 1 to 8, wherein the amount of the pulverulent phase is 3 to 40% by weight, preferably 5 to 35% by weight, and more preferably 10 to 30% by weight, relative to the total weight of the composition.

10. The cosmetic composition according to any one of Claims 1 to 9, wherein the amount of the aqueous phase is 30 to 97% by weight, preferably 35 to 85% by weight, and more preferably 40 to 75% by weight, relative to the total weight of the composition.

11. A cosmetic process for making up, in particular, matting or reducing glittering of the skin, comprising
applying the cosmetic composition according to any one of Claims 1 to 10 onto the skin.

INTERNATIONAL SEARCH REPORT

International application No
PCT/JP2014/063133

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61K8/25 A61K8/26 A61Q1/02 A61K8/04 A61K8/19
ADD.

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

B. FIELDS SEARCHED

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

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

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MEHMET DOGAN ET AL: "SOME PHYSICOCHEMICAL PROPERTIES OF PERLITE AS AN ADSORBENT", FRESENIUS ENVIRONMENTAL BULLETIN, vol. 13, 1 January 2004 (2004-01-01), pages 251-257, XP055145059, page 252, column 1, paragraph 1 -----	1,2
X	WO 2012/081132 A2 (OREAL [FR]; KAWAMOTO MAKOTO [JP]) 21 June 2012 (2012-06-21) example 3 ----- -/--	1,3-6, 8-11

[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"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	Date of mailing of the international search report
13 October 2014	03/11/2014

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Lenzen, Achim

2

Form PCT/ISA/210 (second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

International application No
PCT/JP2014/063133

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Anonymous: "AEROSIL R 972", Evonik Industries , February 2008 (2008-02), page 2PP, XP002730765, Retrieved from the Internet: URL:http://www.novochem.ro/letoltes/aerosil%20r%20972%20en.pdf [retrieved on 2014-10-08] page 1; table 1	1-11
Y	DATABASE CA [Online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; "Cosmetic makeups containing kaolin and titanium oxide", XP002730766, Database accession no. 106:23100 abstract & JP S61 207318 A (SHISEIDO CO LTD) 13 September 1986 (1986-09-13)	1-11
Y	FR 2 881 643 A1 (OREAL [FR]) 11 August 2006 (2006-08-11) page 1, line 1 - line 9	1-11
A	Anonymous: "SUNSPHERE", AGC Asahi Glass , page 3PP, XP002730767, Retrieved from the Internet: URL:https://www.agc.com/english/chemicals/shinsei/gel/sun-gel.htm [retrieved on 2014-10-08] page 1	1-11
A	US 4 732 754 A (KREVALD HELGA [US]) 22 March 1988 (1988-03-22) examples 3-7	1-11
X,P	WO 2013/190112 A1 (OREAL [FR]) 27 December 2013 (2013-12-27) examples F1,F2 page 36, line 3	1-11

2

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/JP2014/063133

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2012081132 A2	21-06-2012	JP 2013545720 A	26-12-2013
		WO 2012081132 A2	21-06-2012
FR 2881643 A1	11-08-2006	NONE	
US 4732754 A	22-03-1988	NONE	
WO 2013190112 A1	27-12-2013	FR 2992203 A1	27-12-2013
		WO 2013190112 A1	27-12-2013