

DESCRIPTION

Title of Invention: COSMETIC COMPOSITION

RELATED APPLICATION

[0001]

This application is based upon and claims the benefit of the priority of Japanese Patent Application No. 2016-217920, filed on November 8, 2016, the disclosure of which is incorporated herein by reference in its entirety.

FIELD OF THE INVENTION

[0002]

The present disclosure relates to a cosmetic composition. For example, the present disclosure relates to a composition applicable to a hair styling agent.

BACKGROUND OF THE INVENTION

[0003]

Cosmetics comprising silica are disclosed in Patent Literatures 1 to 3, for example.

[0004]

The emulsified cosmetic described in Patent Literature 1 comprises (a) 1.0 to 2.0% by mass of a hydrophobically modified polyether urethane indicated by a specific structural formula, (b) a microgel obtained by crushing a gel comprised of a hydrophilic compound having gelling capability, and (c) 0.5 to 2.0% by mass of a spherical silica powder.

[0005]

The gel-like hair-dressing composition described in Patent Literature 2 comprises (A) silicic acid anhydride and/or hydrophobic silicic acid anhydride, (B) smectite clay minerals, and (C) water. The non-emulsified type hair-dressing composition comprises (A) silicic acid anhydride and/or hydrophobic silicic acid anhydride, (B) a polyhydric alcohol, and (C) a

polysaccharide-based thickener.

CITATION LIST

PATENT LITERATURE

[0006]

PATENT LITERATURE 1: JP Patent Kokai Publication No. JP2014-40385A

PATENT LITERATURE 2: JP Patent Kokai Publication No. JP2012-102056A

PATENT LITERATURE 3: JP Patent Kokai Publication No. JP2012-102058A

DISCLOSURE OF THE INVENTION

TECHNICAL PROBLEM

[0007]

The hair styling agent that uses the emulsified cosmetic described in Patent Literature 1 comprising the spherical silica powder is low in hair-styling capability for styling hair in a natural style, low in hair-styling capability immediately after use, and low in re-styling capability for re-styling the hairstyle.

[0008]

Clay minerals and polysaccharides used as thickeners in the hair-dressing preparations described in Patent Literatures 2 and 3 cause stickiness to users and squeakiness upon use.

[0009]

Accordingly, there is a demand for a cosmetic composition that has good feeling in use while having a high hair-styling capability, hair-styling capability immediately after application and re-styling capability.

SOLUTION TO THE PROBLEM

[0010]

According to a first aspect of the present disclosure, a composition is provided, which comprises an irregular silica powder and an associative thickener.

EFFECT OF THE INVENTION

[0011]

According to a cosmetic composition of the present disclosure, a high hair-styling capability, a high hair-styling capability immediately after use and a high re-styling capability can be obtained. Furthermore, according to the cosmetic composition of the present disclosure, stickiness and squeakiness can be suppressed. Consequently, the user can obtain a preferable feeling in use.

MODES FOR CARRYING OUT THE INVENTION

[0012]

According to a preferred mode of the first aspect, the silica powder has a BET specific surface area of 50 m²/g or more (excluding the internal surface area).

[0013]

According to a preferred mode of the first aspect, the content by percentage of the silica powder is 0.1% by mass to 3% by mass with respect to the mass of the cosmetic composition.

[0014]

According to a preferred mode of the first aspect, the associative thickener is a hydrophobically modified polyether urethane and/or a taurate-based synthetic polymer.

[0015]

According to a preferred mode of the first aspect, the hydrophobically modified polyether urethane has a following structural formula (I).



[In the formula (I), R¹, R² and R⁴ are each independently a hydrocarbon group having 2 to 4 carbon atoms;

R³ is a hydrocarbon group having 1 to 10 carbon atoms which may have a urethane bond;

R⁵ is a hydrocarbon group having 8 to 36 carbon atoms;

m is a number of 2 or more;

h is a number of 1 or more;

k is a number of 1 to 500; and

n is a number of 1 to 200]

[0016]

According to a preferred mode of the first aspect, the hydrophobically modified polyether urethane is PEG-240/HDI Copolymer Bis-Decyltetradeceth-20 Ether Copolymer.

[0017]

According to a preferred mode of the first aspect, the taurate-based synthetic polymer is a polymer and/or a copolymer (including a crosslinked polymer) having 2-acrylamido-2-methylpropanesulphonic acid or a salt thereof as a constituent unit.

[0018]

According to a preferred mode of the first aspect, the taurate-based synthetic polymer is Ammonium Acryloyldimethyltaurate/Beheneth-25 Methacrylate Crosspolymer.

[0019]

According to a preferred mode of the first aspect, the content by percentage of the associative thickener is 0.3% by mass to 3% by mass with respect to the mass of the cosmetic composition.

[0020]

According to a preferred mode of the first aspect, the cosmetic composition further comprises 0.1% by mass to 0.5% by mass of a carboxyvinyl polymer.

[0021]

According to a preferred mode of the first aspect, the content by percentage of an oily component is less than 0.2% by mass.

[0022]

According to a preferred mode of the first aspect, the composition has the viscosity of 10,000 mPa·s to 100,000 mPa·s.

[0023]

In the following description, POE is an abbreviation of polyoxyethylene, POP is an

abbreviation of polyoxypropylene, and the number in parentheses after POE or POP indicates the average number of moles of POE groups or POP groups added in the compound in question.

[0024]

A cosmetic composition according to a first embodiment of the present disclosure will be described. The cosmetic composition of the present disclosure is applicable to a hair styling agent, for example. In cases where the composition of the present disclosure comprises an oil component, the composition is preferably an oil-in-water type.

[0025]

The cosmetic composition of the present disclosure comprises a irregular silica powder and a associative thickener.

[0026]

[Silica powder]

Silica is referred to as silica dioxide, silicic acid anhydride, and the like. A fumed silica powder, for example, can be used as the silica powder. The silica surface is preferably hydrophilic.

[0027]

Irregular means that each particle in the powder is not generally spherical, for example. The BET specific surface area of the silica powder, excluding the internal surface area (supposing that it is non-porous), is preferably $50 \text{ m}^2/\text{g}$ or more, more preferably $100 \text{ m}^2/\text{g}$ or more, and further more preferably $150 \text{ m}^2/\text{g}$ or more. An average primary particle size of the silica powder is preferably $1 \text{ }\mu\text{m}$ or less. By enlarging the external surface area of the silica powder, hair-styling capability and re-styling capability can be enhanced. Commercial products of the silica powder such as AEROSIL® series 90, 130, 150, 200, 300, 380, OX50, TT600, R972, R974, R9200, RY200 and the like (EVONIK Industries AG) can be used, for example.

[0028]

The content by percentage of the silica powder is preferably 0.1% by mass or more, more

preferably 0.2% by mass or more, more preferably 0.4% by mass or more, more preferably 0.5% by mass or more, and further more preferably 0.8% by mass or more with respect to the mass of the composition. If the content by percentage of the silica powder is less than 0.1% by mass, sufficient hair-styling capability, hair-styling capability immediately after application and re-styling capability will not be achieved. Furthermore, the content by percentage of the silica powder is preferably 3% by mass or less, more preferably 2.5% by mass or less, and further more preferably 2% by mass or less with respect to the mass of the composition. If the content by percentage of the silica powder exceeds 3% by mass, stickiness or squeakiness will be intensified.

[0029]

The cosmetic composition of the present disclosure may comprise a spherical silica powder within the range of not inhibiting the effect of the present disclosure.

[0030]

[Associative thickener]

The associative thickener usually has a hydrophobic part and a hydrophilic part. The associative thickener preferably has the hydrophobic parts at its both ends. Further, the associative thickener preferably has the hydrophilic part between the hydrophobic parts. For example, it is considered that a certain associative thickener forms a network (net structure) by association of the hydrophobic parts to exhibit thickening effect.

[0031]

Examples of the associative thickener that may be used may include a hydrophobically modified polyether urethane and/or taurate-based synthetic polymer. Even if the thickening mechanisms of the thickeners listed below are not associative, such thickeners are not excluded from the thickeners applicable for the composition of the present disclosure.

[0032]

Examples of the hydrophobically modified polyether urethane that may be used may include a polymer having a structural formula (I) shown below.



[0033]

In the structural formula (I), it is preferred that R^1 , R^2 and R^4 are each independently a hydrocarbon group having 2 to 4 carbon atoms, and more preferably an alkylene group having 2 to 4 carbon atoms. R^3 is preferably a hydrocarbon group having 1 to 10 carbon atoms, which may have a urethane bond. R^5 is preferably a hydrocarbon group having 8 to 36 carbon atoms, and more preferably a hydrocarbon group having 12 to 24 carbon atoms. For example, R^1 may be an ethylene group. For example, R^2 may be an ethylene group. For example, R^3 may be an alkylene group having 4 to 8 carbon atoms. For example, R^4 may be an ethylene group. For example, R^5 may be an alkyl group having a branched chain and 16 to 32 carbon atoms.

[0034]

In the structural formula (I), m is preferably a number of 2 or more. h is preferably a number of 1 or more, and more preferably 1. k is preferably a number of 1 to 500, and more preferably 100 to 300. n is preferably a number of 1 to 200, and more preferably 10 to 100.

[0035]

For example, the hydrophobically modified polyether urethane represented by the above formula (I) can be obtained by reacting one or more types of polyetherpolyol represented by $R^1[(OR^2)_kOH]_m$, one or more types of polyisocyanate represented by $R^3(NCO)_{h+1}$, and one or more types of polyether monoalcohol represented by $HO(R^4O)_nR^5$. The ratio of the isocyanate group(s) derived from polyisocyanate to the hydroxyl group(s) derived from polyetherpolyol and polyether monoalcohol is preferably $NCO:OH=0.8:1$ to $1.4:1$.

[0036]

The polyetherpolyol compound represented by the above formula $R^1[(OR^2)_kOH]_m$ can be obtained by addition-polymerizing alkylene oxide such as ethylene oxide, propylene oxide, butylene oxide, epichlorohydrin and the like, and styrene oxide and the like to m -hydric polyol. R^1 is determined by m -hydric polyol. R^2 is determined by alkylene oxide, styrene oxide and the like. The molecular weight of $R^1[(OR^2)_kOH]_m$ is preferably 500 to 100,000, and more preferably 1,000 to 50,000.

[0037]

Polyol of 2- to 8-hydric is preferred. Examples of polyol may include: dihydric alcohol such as ethylene glycol, propylene glycol, butylene glycol, hexamethylene glycol, neopentyl glycol, and the like; trihydric alcohol such as glycerin, trioxymethane, 1,2,3-butanetriol, 1,2,3-pentanetriol, 2-methyl-1,2,3-propanetriol, 2-methyl-2,3,4-butanetriol, 2-ethyl-1,2,3-butanetriol, 2,3,4-pentanetriol, 2,3,4-hexanetriol, 4-propyl-3,4,5-heptanetriol, 2,4-dimethyl-2,3,4-pentanetriol, pentamethyl glycerin, pentaglycerin, 1,2,4-butanetriol, 1,2,4-pentanetriol, trimethylolethane, trimethylolpropane and the like; tetrahydric alcohol such as pentaerythritol, 1,2,3,4-pentanetetrol, 2,3,4,5-hexanetetrol, 1,2,4,5-pentanetetrol, 1,3,4,5-hexanetetrol and the like; pentahydric alcohol such as adonitol, arabitol, xylitol and the like; hexahydric alcohol such as dipentaerythritol, sorbitol, mannitol, iditol and the like; and octahydric alcohol such as sucrose and the like.

[0038]

Alkyene oxide, styrene oxide and the like to be added is preferably alkyene oxide having 2 to 4 carbon atoms or styrene oxide because they are especially easy to obtain and can exhibit excellent effect. Alkyene oxide, styrene oxide and the like may be in the form of homo-polymerization, or of random-polymerization or block-polymerization of two or more types. The addition method may be any ordinary method. The polymerization degree k is preferably 0 to 1,000, more preferably 1 to 500, and further more preferably 10 to 200. The proportion of the ethylene group in R^2 is preferably 50 to 100% by mass with respect to the total of R^2 .

[0039]

Polyisocyanate represented by the above formula $R^3(NCO)_{h+1}$ is not particularly limited as long as it has two or more isocyanate groups in the molecule. Examples of polyisocyanate may include: aliphatic diisocyanate; aromatic diisocyanate; alicyclic diisocyanate; biphenyl diisocyanate; and diisocyanate, triisocyanate and tetraisocyanate of phenyl methane; and the like.

[0040]

Examples of aliphatic diisocyanate may include: methylene diisocyanate, dimethylene diisocyanate, trimethylene diisocyanate, tetramethylene diisocyanate, pentamethylene diisocyanate, hexamethylene diisocyanate, dipropylether diisocyanate, 2,2-dimethylpentane diisocyanate, 3-methoxyhexane diisocyanate, octamethylene diisocyanate, 2,2,4-trimethylpentane diisocyanate, nonamethylene diisocyanate, decamethylene diisocyanate, 3-butoxyhexane diisocyanate, 1,4-butylene glycol dipropyl ether diisocyanate, thiodihexyl diisocyanate, metaxylylene diisocyanate, paraxylylene diisocyanate, tetramethylxylylene diisocyanate, and the like.

[0041]

Examples of the aromatic diisocyanate may include metaphenylene diisocyanate, paraphenylene diisocyanate, 2,4-tolylene diisocyanate, 2,6-tolylene diisocyanate, dimethylbenzene diisocyanate, ethylbenzene diisocyanate, isopropylbenzene diisocyanate, tolidinediisocyanate, 1,4-naphthalene diisocyanate, 1,5-naphthalene diisocyanate, 2,6-naphthalene diisocyanate, 2,7-naphthalene diisocyanate, and the like.

[0042]

Examples of the alicyclic diisocyanate may include hydrogenated xylylene diisocyanate, isophorone diisocyanate, and the like.

[0043]

Examples of the biphenyl diisocyanate may include biphenyl diisocyanate, 3,3'-dimethylbiphenyl diisocyanate, 3,3'-dimethoxybiphenyl diisocyanate, and the like.

[0044]

Examples of the phenylmethane diisocyanate may include diphenylmethane-4,4'-diisocyanate, 2,2'-dimethyldiphenylmethane-4,4'-diisocyanate, diphenyldimethylmethane-4,4'-diisocyanate, 2,5,2',5'-tetramethyldiphenylmethane-4,4'-diisocyanate, cyclohexyl bis(4-isocyanatophenyl)methane, 3,3'-dimethoxydiphenylmethane-4,4'-diisocyanate, 4,4'-dimethoxydiphenylmethane-3,3'-diisocyanate, 4,4'-diethoxydiphenylmethane-3,3'-diisocyanate,

2,2'-dimethyl-5,5'-dimethoxydiphenylmethane-4,4'-diisocyanate,
3,3'-dichlorodiphenyldimethylmethane-4,4'-diisocyanate, benzophenone-3,3'-diisocyanate,
and the like.

[0045]

Examples of the phenylmethane triisocyanate may include
1-methylbenzene-2,4,6-triisocyanate, 1,3,5-trimethylbenzene-2,4,6-triisocyanate,
1,3,7-naphthalene triisocyanate, biphenyl-2,4,4'-triisocyanate,
diphenylmethane-2,4,4'-triisocyanate, 3-methyldiphenylmethane-4,6,4'-triisocyanate,
triphenylmethane-4,4',4''-triisocyanate, 1,6,11-undecane triisocyanate,
1,8-diisocyanate-4-isocyanatemethyloctane, 1,3,6-hexamethylene triisocyanate,
bicycloheptane triisocyanate, tris(isocyanatophenyl) thiophosphate, and the like.

[0046]

Polyisocyanates may also be used in the form of a dimer or a trimer (isocyanurate bond)
of the polyisocyanate compound and may also be used as biuret by reacting with an amine.

[0047]

Furthermore, polyisocyanates having a urethane bond, which are prepared by reacting
these polyisocyanate compounds with polyols, can also be used. As the polyols, dihydric to
octahydric ones are preferred, and the aforementioned polyols are preferred. When a tri- or
more hydric polyisocyanate is used as $R^3-(NCO)_{h+1}$, these polyisocyanates having a urethane
bond are preferred.

[0048]

The polyether monoalcohol represented by the above formula $HO(R^4O)_n-R^5$ is not
particularly limited as long as it is a monohydric alcohol polyether. The polyether
monoalcohol can be obtained by addition-polymerizing an alkylene oxide such as ethylene
oxide, propylene oxide, butylene oxide, and epichlorohydrin or a styrene oxide, to a
monohydric alcohol.

[0049]

The monohydric alcohol as used herein can be represented by the following formulae (II),

(III), and (IV):



[0050]

R^5 can be a hydrocarbon group of which the hydroxyl group is removed from the above formulae (II) to (IV). As R^5 , preferably, examples of R^6 , R^7 , R^8 , R^{10} and R^{11} may include an alkyl group, an alkenyl group, an alkylaryl group, a cycloalkyl group, a cycloalkenyl group, and the like. The number of carbon atoms of R^5 is preferably 8 to 36, and more preferably 12 to 24.

[0051]

Examples of the alkyl group may include methyl, ethyl, propyl, isopropyl, butyl, isobutyl, tertiary butyl, pentyl, isopentyl, neopentyl, tertiary pentyl, hexyl, heptyl, octyl, 2-ethylhexyl, nonyl, decyl, undecyl, dodecyl, tridecyl, isotridecyl, myristyl, palmityl, stearyl, isostearyl, icosyl, docosyl, tetracosyl, triacontyl, 2-octyldodecyl, 2-dodecylhexadecyl, 2-tetradecyloctadecyl, monomethyl-branched isostearyl, and the like.

[0052]

Examples of the alkenyl group may include vinyl, allyl, propenyl, isopropenyl, butenyl, pentenyl, isopentenyl, hexenyl, heptenyl, octenyl, nonenyl, decenyl, undecenyl, dodecenyl, tetradecenyl, oleyl, and the like.

[0053]

Examples of the alkylaryl group may include phenyl, toluyl, xylyl, cumenyl, mesityl, benzyl, phenethyl, styryl, cinnamyl, benzhydryl, trityl, ethylphenyl, propylphenyl, butylphenyl, pentylphenyl, hexylphenyl, heptylphenyl, octylphenyl, nonylphenyl, α -naphthyl, β -naphthyl, and the like.

[0054]

Examples of the cycloalkyl group and the cycloalkenyl group may include cyclopentyl, cyclohexyl, cycloheptyl, methylcyclopentyl, methylcyclohexyl, methylcycloheptyl,

cyclopentenyl, cyclohexenyl, cycloheptenyl, methylcyclopentenyl, methylcyclohexenyl, methylcycloheptenyl, and the like.

[0055]

In the above formula (III), R^9 is preferably a hydrocarbon group, and more preferably an alkylene group, an alkenylene group, an alkylarylene group, a cycloalkylene group, and a cycloalkenylene group, for example.

[0056]

The alkylene oxide, styrene oxide and the like to be added may be in the form of homo-polymerization, or of random-polymerization or block-polymerization of two or more types. The addition method may be any ordinary method. The polymerization degree n is preferably 0 to 1000, more preferably 1 to 200, and further more preferably 10 to 200. Further, the proportion of the ethylene group in R^4 is preferably 50% by mass to 100% by weight, more preferably 65% by mass to 100% by weight with respect to the total of R^4 .

[0057]

As a method for producing the copolymer represented by the above formula (I), any ordinary reaction of polyether and isocyanate can be used. For example, polyether and isocyanate can be reacted by heating at 80 to 90 °C for 1 to 3 hours.

[0058]

Further, when reacting (A) the polyether polyol represented by $R^1[(OR^2)_kOH]_m$, (B) the polyisocyanate represented by $R^3(NCO)_{h+1}$, and (C) the polyether monoalcohol represented by $HO(R^4O)_nR^5$, by-products other than the copolymer having the structure of the formula (I) may be produced. For example, when a diisocyanate is used, the C-B-A-B-C type copolymer represented by the formula (I) is produced as a main product, and compounds such as C-B-C type, C-B-(A-B)_x-A-B-C type and the like may be produced as by-products. In this case, without particularly separating the copolymer of the formula (I) type, a mixture that includes the copolymer of the formula (I) type may be used in the present invention.

[0059]

Examples of the associative thickener that may be used may include PEG-240/HDI

Copolymer Bis-Decyltetradeceth-20 Ether Copolymer (which is a copolymer shown in the above formula (I) wherein R^1 , R^2 and R^4 are respectively an ethylene group, R^3 is a hexamethylene group, R^5 is a 2-dodecyl dodecyl group, h is 1, m is 2, k is 120, and n is 20) (“Adekanol® GT-700”, ADEKA CORPORATION).

[0060]

Examples of the associative thickener may include taurate-based synthetic polymer and/or acrylate-based synthetic polymer. For example, as the taurate-based synthetic polymer type associative thickener, a polymer and/or a copolymer (including a crosspolymer) having 2-acrylamido-2-propanesulphonic acid (acryloyldimethyltaurine) or a salt thereof (AMPS structure) as a constituent unit may be used. Examples of such associative thickener may include Ammonium Acryloyldimethyltaurate/Beheneth-25 Methacrylate Crosspolymer (Aristoflex® HMB, Clariant (Japan) K.K.).

[0061]

If the cosmetic composition is thickened only with clay mineral-based thickeners or polysaccharide-based thickeners, the composition may be sticky or squeaky for the user. However, by using the associative thickener, the cosmetic composition can be thickened while stickiness or squeakiness is suppressed.

[0062]

Furthermore, feeling in use can be enhanced when carboxyvinyl polymer (Carbomer) is used in the cosmetic composition. However, in cases where the associative thickener is not present, if a composition comprising the silica powder is thickened by carboxyvinyl polymer, the silica powder may aggregate. By adding the associative thickener, aggregation of the silica powder can be suppressed even if carboxyvinyl polymer is present. Accordingly, a good feeling in use can be maintained, aggregation of the silica powder can be suppressed, and the cosmetic composition can be thickened.

[0063]

The content by percentage of the associative thickener in the composition is preferably 0.3% by mass or more, more preferably 0.4% by mass or more, more preferably 0.5% by

mass or more, more preferably 0.8% by mass or more, and further more preferably 1% by mass or more with respect to the mass of the composition. If the content by percentage of the associative thickener is less than 0.3% by mass, sufficient thickening effect cannot be achieved. The content by percentage of the associative thickener in the composition is preferably 3% by mass or less, more preferably 2.5% by mass or less, and further more preferably 2% by mass or less with respect to the mass of the composition. If the content by percentage of the associative thickener exceeds 3% by mass, viscosity may be too high so that filling property to a container, spreadability upon application and compatibility to hair will deteriorate.

[0064]

Other thickeners can be added to the composition of the present disclosure within the range of not inhibiting the effect of the present disclosure. Examples of other thickeners may include gum arabic, carrageenan, karaya gum, tragacanth gum, carob gum, quince seed (marmelo), casein, dextrin, gelatin, sodium pectate, sodium alginate, methylcellulose, ethyl cellulose, carboxymethyl cellulose (CMC), hydroxyethyl cellulose, hydroxypropyl cellulose, polyvinyl alcohol (PVA), polyvinyl methyl ether (PVM), PVP (polyvinyl pyrrolidone), sodium polyacrylate, carboxyvinyl polymer, locustbean gum, guar gum, tamarind gum, dialkyldimethylammonium sulfate cellulose, xanthan gum, magnesium aluminum silicate, bentonite, hectorite, magnesium aluminum silicate (veegum), laponite, silicic anhydride and the like.

[0065]

Carboxyvinyl polymer is preferably used as a thickener to be used together with the associative thickener. Carboxyvinyl polymer enables feeling in use of the cosmetic composition to be enhanced. For example, hair-styling capability immediately after use and stability over time can be enhanced. The content by percentage of carboxyvinyl polymer is preferably 0.08% by mass or more, and more preferably 0.1% by mass or more with respect to the mass of the composition. If the content by percentage of carboxyvinyl polymer is less than 0.08% by mass, feeling in use cannot be improved. The content by percentage of the

carboxyvinyl polymer is preferably 0.5% by mass or less, and more preferably 0.3% by mass or less with respect to the mass of the composition. If the content by percentage of carboxyvinyl polymer exceeds 0.5% by mass, viscosity will be too high so that filling property to a container, spreadability upon application, and compatibility to hair will deteriorate.

[0066]

When carboxyvinyl polymer is added to the cosmetic composition, it is preferable that the cosmetic composition further comprises a neutralizer such as alkaline compounds and the like in accordance with the amount of carboxyvinyl polymer added. Examples of the neutralizer may include potassium hydroxide, sodium hydroxide and the like.

[0067]

As the thickener to be used together with the associative thickener, a mineral-based thickener such as sodium magnesium silicate and the like and/or a polysaccharide-based thickener such as xanthan gum and the like can be used. By using the associative thickener together with the mineral-based thickener and/or the polysaccharide-based thickener, hair-styling capability and hair-styling capability immediately after application can be enhanced while stickiness and squeakiness caused by the mineral-based thickener and the polysaccharide based thickener are suppressed. The content by percentage of the mineral-based thickener is preferably 0.5% by mass or more, and more preferably 0.8% by mass or more with respect to the mass of the composition. If the content by percentage of the mineral-based thickener is less than 0.5% by mass, viscosity of the agent cannot be adjusted and hair-styling capability cannot be enhanced. The content by percentage of the mineral-based thickener is preferably 2% by mass or less, and more preferably 1.5% by mass or less with respect to the mass of the composition. If the content by percentage of the mineral-based thickener exceeds 2% by mass, stickiness and squeakiness may occur. The content by percentage of the polysaccharide-based thickener is preferably 0.05% by mass or more, and more preferably 0.08% by mass or more with respect to the mass of the composition. If the content by percentage of the polysaccharide-based thickener is less than

0.05% by mass, viscosity of the agent cannot be adjusted and hair-styling capability cannot be enhanced. The content by percentage of the polysaccharide-based thickener is preferably 1.5% by mass or less, and more preferably 1% by mass or less with respect to the mass of the composition. If the content by percentage of the polysaccharide-based thickener exceeds 1.5% by mass, stickiness and squeakiness may occur.

[0068]

[Powder other than the silica powder]

The cosmetic composition of the present disclosure can further comprise a powder other than the silica powder within the range of not inhibiting the effect of the present disclosure.

[0069]

Examples of the powder bodies may include inorganic powder (such as talc, kaolin, mica, sericite, muscovite, phlogopite, synthetic mica, lepidolite, biotite, vermiculite, magnesium carbonate, calcium carbonate, aluminum silicate, barium silicate, calcium silicate, magnesium silicate, strontium silicate, tungstate, magnesium, silica, zeolite, glass, barium sulfate, calcined calcium sulfate (calcined gypsum), calcium phosphate, fluorine apatite, hydroxyapatite, ceramic powder, metallic soap (such as zinc myristate, calcium palmitate, and aluminum stearate), and boron nitride, etc); organic powder (such as polyamide resin powder (nylon powder), polyethylene powder, polymethylmethacrylate powder, polystyrene powder, styrene-acrylic acid copolymer powder, benzoguanamine resin powder, poly(tetrafluoroethylene) powder, and cellulose powder, silicone resin powder, silk powder, wool powder, urethane powder, etc); inorganic white family pigment (such as titanium dioxide, zinc oxide, etc); inorganic red family pigment (such as iron oxide (colcothar), iron titanate, etc); inorganic brown family pigment (such as γ -iron oxide, etc); inorganic yellow family pigment (such as yellow iron oxide, loess, etc); inorganic black family pigment (such as black iron oxide, carbon black, lower titanium oxide, etc); inorganic purple family pigment (such as manganese violet, cobalt violet, etc); inorganic green family pigment (such as chrome oxide, chrome hydroxide, cobalt titanate, etc); inorganic blue family pigment (such as

ultramarine, iron blue, etc); pearl pigment (such as titanium oxide coated mica, titanium oxide coated bismuth oxychloride, titanium oxide coated talc, colored titanium oxide coated mica, bismuth oxychloride, argentine, etc); metal powder pigment (such as aluminum powder, copper powder, etc); organic pigment such as zirconium, barium, or aluminum lake (such as organic pigment such as Red No.201, Red No.202, Red No.204, Red No.205, Red No.220, Red No.226, Red No.228, Red No.405, Red No.201, Orange No.203, Orange No.204, Yellow No.205, Yellow No.401, Blue No.401, Red No.3, Red No.104, Red No.106, Red No.227, Red No.230, Red No.401, Red No.505, Orange No.205, Yellow No.4, Yellow No.5, Yellow No.202, Yellow No.203, Green No.3, and Blue No.1, etc); natural pigment (such as chlorophyll, β -carotene, etc), and the like.

[0070]

[Others]

The cosmetic composition of the present disclosure may include, as appropriate and as necessary, other components within the range of not inhibiting the effect of the present disclosure such as aqueous solvents, oily components, anionic surfactants, cationic surfactants, amphoteric surfactants, non-ionic surfactants, powder, water-soluble polymers, film-forming agents, ultraviolet absorbers, sequestrants, amino acids, organic amines, polymeric emulsions, pH adjusters, skin nutrients, vitamins, antioxidants, antioxidant aids, perfumes and the like.

[0071]

Examples of other components that may be blended are listed below. At least one of the components listed below may be added to the composition of the present disclosure.

[0072]

Examples of aqueous solvents may include water, alcohols, or mixtures thereof.

[0073]

Water used in cosmetics, quasi-drugs, and the like may be used. For example, purified water, ion-exchanged water, tap water may be used. Depending on the purpose, the aqueous phase may further include a water-soluble alcohol.

[0074]

Examples of water-soluble alcohols may include at least one type selected from lower alcohols, polyhydric alcohols, polyhydric alcohol polymers, dihydric alcohol alkyl ethers, dihydric alcohol alkyl ethers, dihydric alcohol ether esters, glycerin monoalkyl ethers, sugar alcohols, monosaccharides, oligosaccharides, polysaccharides, and derivatives of the above.

[0075]

Examples of the lower alcohol may include ethanol, propanol, isopropanol, isobutyl alcohol, t-butyl alcohol, and the like.

[0076]

Examples of the polyhydric alcohol may include dihydric alcohol (such as ethylene glycol, propylene glycol, trimethylene glycol, 1,2-butylene glycol, 1,3-butylene glycol, tetramethylene glycol, 2,3-butylene glycol, pentamethylene glycol, 2-butene-1,4-diol, hexylene glycol, octylene glycol, etc); trihydric alcohol (such as glycerin, trimethylolpropane, etc); tetrahydric alcohol (such as such as pentaerythritol such as 1,2,6-hexanetriol, etc); pentahydric alcohol (such as xylitol, etc); hexahydric alcohol (such as sorbitol, mannitol, etc); polyhydric alcohol polymer (such as diethylene glycol, dipropylene glycol, triethylene glycol, polypropylene glycol, tetraethylene glycol, diglycerin, polyethylene glycol, triglycerin, tetraglycerin, polyglycerin, etc); dihydric alcohol alkyl ethers (such as ethylene glycol monomethyl ether, ethylene glycol monoethyl ether, ethylene glycol monobutyl ether, ethylene glycol monomphenyl ether, ethylene glycol monohexyl ether, ethylene glycol mono2-methylhexyl ether, ethylene glycol isoamyl ether, ethylene glycol benzil ether, ethylene glycol isopropyl ether, ethylene glycol dimethyl ether, ethylene glycol diethyl ether, ethylene glycol dibutyl ether, etc); dihydric alcohol alkyl ethers (such as diethylene glycol monomethyl ether, diethylene glycol monoethyl ether, diethylene glycol monobutyl ether, diethylene glycol dimethyl ether, diethylene glycol diethyl ether, diethylene glycol butyl ether, diethylene glycol methylethyl ether, triethylene glycol monomethyl ether, triethylene glycol monoethyl ether, propylene glycol monomethyl ether, propylene glycol monoethyl ether, propylene glycol monobutyl ether, propylene glycol isopropyl ether, dipropylene glycol methyl ether, dipropylene glycol ethyl ether, dipropylene glycol butyl ether, etc); dihydric

alcohol ether ethers (such as ethylene glycol monomethyl ether acetate, ethylene glycol monoethyl ether acetate, ethylene glycol monobutyl ether acetate, ethylene glycol monophenyl ether acetate, ethylene glycol diadipate, ethylene glycol disaccinate, diethylene glycol monoethyl ether acetate, diethylene glycol monobutyl ether acetate, propylene glycol monomethyl ether acetate, propylene glycol monoethyl ether acetate, propylene glycol monopropyl ether acetate, propylene glycol monophenyl ether acetate, etc); glycerin monoalkyl ether (such as chimyl alcohol, selachyl alcohol, batyl alcohol, etc); sugar alcohol (such as sorbitol, maltitol, maltotriose, mannitol, sucrose, erythritol, glucose, fructose, starch sugar, maltose, xylitose, starch sugar hydrogenated alcohol, etc); glycolide, tetrahydrofurfuryl alcohol; POE-tetrahydrofurfuryl alcohol; POP/POE-butyl ether; tripolyoxypropylene glycerin ether; POP-glycerin ether; POP-glycerin ether phosphoric acid; POP/POE-pentaerythritol ether; polyglycerin, and the like.

[0077]

Examples of the monosaccharides may include at least one selected from triose (such as D-glyceryl aldehyde, dihydroxyacetone, etc); tetrose (such as D-erythrose, D-erythrulose, D-threose, erythritol, etc); pentose (such as L-arabinose, D-xylose, L-lyxose, D-arabinose, D-ribose, D-ribulose, D-xylulose, L-xylulose, etc); hexalose (such as D-glucose, D-talose, D-psicose, D-galactose, D-fructose, L-galactose, L-mannose, D-tagatose, etc); heptose (such as aldoheptose, heptose); octose (such as octulose, etc); deoxy sugar (such as 2-deoxy-D-ribose, 6-deoxy-L-galactose, 6-deoxy-L-mannose, etc); amino sugar (such as D-glucosamine, D-galactosamine, sialic acid, amino uronic acid, muramic acid, etc); uronic acid (such as D-grucuronic acid, D-mannuronic acid, L-guluronic acid, D-garacturonic acid, L-iduronic acid, etc) and the like.

[0078]

Examples of the oligosaccharide may include at least one selected from sucrose, guntianose, umbelliferose, lactose, planteose, isolignoses, α,α -trehalose, raffinose, lignoses, umbilicin, stachyose, verbascoses, and the like.

[0079]

Examples of the polysaccharide may include at least one selected from cellulose, quince seed, chondroitinsulfate, starch, galactan, dermatan sulfate, glycogen, acacia gum, heparansulfate, hyaluronan, gum tragacanth, keratan sulfate, chondroitin, xanthan gum, mucoitin sulfate, guar gum, dextran, keratosulfate, locust bean gum, succinoglycan, caronic acid, and the like.

[0080]

Examples of other polyols may include at least one selected from polyoxyethylene methyl glucoside (Glucum E-10), polyoxypropylene methyl glucoside (Glucum P-10), and the like.

[0081]

Examples of the anionic surfactants that may be used may include fatty acid soap (such as sodium laurate, and sodium palmitate); higher alkyl sulfate ester salt (such as sodium lauryl sulfate, and potassium lauryl sulfate); alkyl ether sulfate ester salt (such as POE-lauryl sulfate triethanolamine, and sodium POE-lauryl sulfate); N-acyl sarcosinic acid (such as sodium lauroyl sarcocinate); higher fatty acid amide sulfonate (such as sodium N-stearoyl-N-methyltaurate, sodium N-myristoyl-N-methyltaurate, sodium methyl cocoyl taurate, and sodium laurylmethyl taurate); phosphate ester salt (sodium POE-oleylether phosphate, and POE-stearylether phosphate); sulfosuccinate (such as sodium di-2-ethylhexyl sulfosuccinate, sodium monolauroyl monoethanolamide polyethylene sulfosuccinate, and sodium lauryl polypropylene glycol sulfosuccinate); alkylbenzene sulfonate (such as sodium linear dodecylbenzene sulfonate, triethanolamine linear dodecylbenzene sulfonate, and linear dodecylbenzene sulfonate); higher fatty acid ester sulfate ester salt (such as sodium hydrogenated glyceryl cocoate sulfate); N-acyl glutamate (such as monosodium N-lauroyl glutamate, disodium N-stearoyl glutamate, and monosodium N-myristoyl-L-glutamate); sulfonated oil (such as Turkey red oil); POE-alkyl ether carboxylic acid; POE-alkyl aryl ether carboxylate; α -olefine sulfonate; higher fatty acid ester sulfonate; secondary alcohol sulfate ester salt; higher fatty acid alkylolamide sulfate ester salt; sodium lauroyl monoethanolamide succinate; N-palmitoyl asparaginate ditriethanolamine; sodium casein; and the like.

[0082]

Examples of the cationic surfactants may include alkyltrimethyl ammonium salt (such as stearyltrimethyl ammonium chloride, lauryltrimethyl ammonium chloride); alkylpyridinium salt (such as cetylpyridinium chloride); distearyldimethyl ammonium chloride; dialkyldimethyl ammonium salt; poly (N,N'-dimethyl-3,5-methylenepiperidinium) chloride; alkyl quaternary ammonium salt; alkyldimethylbenzyl ammonium salt; alkylisoquinolinium salt; dialkylmorphonium salt; POE alkylamine; alkylamine salt; polyamine fatty acid derivative; amyl alcohol fatty acid derivative; benzalkonium chloride; benzethonium chloride, and the like.

[0083]

Examples of the amphoteric surfactant that may be used may include: imidazoline-based amphoteric surfactant (such as sodium 2-undecyl-N,N,N-(hydroxyethylcarboxymethyl)-2-imidazoline and 2-cocoyl-2-imidazolinium hydroxide-1-carboxyethyloxy disodium salt); and betaine-based surfactant (such as 2-heptadecyl-N-carboxymethyl-N-hydroxyethyl imidazolinium betaine, lauryl dimethylaminoacetic acid betaine, alkyl betaine, amidobetaine, and sulfobetaine).

[0084]

Examples of the lipophilic nonionic surfactants may include sorbitan fatty acid ester (such as sorbitan monooleate, sorbitan monoisostearate, sorbitan monolaurate, sorbitan monopalmitate, sorbitan monostearate, sorbitan sesquioleate, sorbitan trioleate, diglycerol sorbitan penta-2 ethylhexylate, diglycerol sorbitan tetra-2 ethylhexylate, etc); glyceryl polyglyceryl fatty acid (such as glyceryl monocotton oil fatty acid, glyceryl monoerucate, glyceryl sesquioleate, glyceryl monostearate, glyceryl α , α' -oleate pyroglutamate, glyceryl monostearate malate, etc); propylene glycol fatty acid ester (such as propylene glycol monostearate, etc); hydrogenated castor oil derivative; glyceryl alkyl ether, and the like.

[0085]

Examples of the hydrophilic nonionic surfactants that may be used may include POE sorbitan fatty acid ester (such as POE sorbitan monooleate, POE sorbitan monostearate, POE

sorbitan monooleate, POE sorbitan tetraoleate); POE sorbit fatty acid ester (such as POE sorbit monolaurate, POE sorbit monooleate, POE sorbit pentaoleate, POE sorbit monostearate), POE glyceryl fatty acid ester (such as POE monooleate such as POE glyceryl monostearate, POE glyceryl monoisostearate, POE glyceryl triisostearate); POE fatty acid ester (such as POE distearate, POE monodioleate, ethyleneglycol distearate); POE alkyl ether (such as POE lauryl ether, POE oleyl ether, POE stearyl ether, POE behenyl ether, POE-2-octyldodecyl ether, POE cholestanol ether); puluronic type (such as Puluronic), POE/POP alkyl ethers (such as POE/POP cetyl ether, POE/POP 2-decyltetradecyl ether, POE/POP monobutyl ether, POE/POP hydrogenated lanoline, POE/POP glycerin ether); tetra POE/tetra POP ethylenediamine condensation products (such as Tetronic); POE castor oil hydrogenated castor oil derivative (such as POE caster oil, POE hydrogenated caster oil, POE hydrogenated caster oil monoisostearate, POE hydrogenated castor oil triisostearate, POE hydrogenated castor oil monopyroglutamate monoisostearate diester, POE hydrogenated oil maleate); POE beeswax/lanoline derivative (such as POE sorbitol beeswax); alkanolamide (such as coconut oil fatty acid diethanolamide, lauric acid monoethanolamide, fatty acid isopropanolamide); POE propyleneglycol fatty acid ester; POE alkyl amines; POE fatty acid amide; sucrose fatty acid ester; alkylethoxydimethylamine oxide; trioylel phosphoric acid and the like.

[0086]

Examples of the moisturizers may include polyethylene glycol, propylene glycol, glycerin, 1,3-butylene glycol, xylitol, sorbitol, maltitol, chondroitin sulfate, hyaluronic acid, mucoitin sulfate, charonic acid, atelocollagen, cholesteryl 12-hydroxystearate, sodium lactate, bile salt, dl-pyrrolidone carboxylate, alkyleneoxide derivative, short-chain soluble collagen, diglycerin (EO)PO adduct, chestnut rose extract, yarrow extract, melilot extract, and the like.

[0087]

Examples of the natural water-soluble polymer may include plant-based polymer (such as gum Arabic, gum tragacanth, galactan, guar gum, locust bean gum, gum karaya, carrageenan, pectine, agar, quince seed (cydonia oblonga), algae colloid (brown algae extract),

starch (rice, corn, potato, wheat) ,glycyrrhizic acid); microorganism based polymer (such as xanthan gum, dextran, succinoglycan, pullulan, etc), animal-based polymer (such as collagen, casein, albumin, gelatine, etc) and the like.

[0088]

Examples of the semisynthetic water-soluble polymer may include starch-based polymer (such as carboxymethyl starch, methylhydroxypropyl starch, etc); cellulose-based polymer (such as methylcellulose, ethylcellulose, methylhydroxypropylcellulose, hydroxyethylcellulose, cellulose sodium sulfate, hydroxypropylcellulose, carboxymethylcellulose, sodium calboxymethyl cellulose, crystalline cellulose, cellulose powder, etc); algin acid-based polymer (such as sodium alginate, propylene glycol alginate ester, etc), and the like.

[0089]

Examples of the synthetic water-soluble polymer may include vinyl based polymer (such as polyvinyl alcohol, polyvinyl methyl ether, polyvinylpyrrolidone, carboxyvinylpolymer, etc); polyoxyethylene based polymer (such as polyoxyethylenepolyoxypropylene copolymer such as polyethylene glycol 20,000, 40,000 and 60,000, etc); acrylic polymer (such as sodium polyacrylate, polyethylacrylate, polyacrylamide, etc); polyethyleneimine; cationic polymer; and the like.

[0090]

Examples of the film-forming agent may include an anionic film-forming agent (such as (meta)acrylic acid/(meta)acrylic acid ester copolymer, methyl vinyl ether/maleic anhydride copolymer, etc), a cationic film-forming agent (such as cationic cellulose, diallyldimethylammonium chloride polymer, diallyldimethylammonium chloride/acrylic amide copolymer, etc), a nonionc film-forming agent (such as polyvinyl alcohol, polyvinylpyrrolidone, polyvinyl acetate, polyacrylic ester copolymer, (meta)acrylamide, polymeric silicone, silicone resin, trimethylsiloxysilicate, etc), and the like.

[0091]

Examples of the ultraviolet light absorbers may include benzoic acid family ultraviolet

light absorber (such as p-aminobenzoic acid (hereinafter abbreviated as PABA), PABA monoglycerine ester, N,N-dipropoxy PABA ethyl ester, N,N-diethoxy PABA ethyl ester, N,N-dimethyl PABA ethyl ester, N,N-dimethyl PABA butyl ester, N,N-dimethyl PABA ethyl ester, etc); anthranilic acid family ultraviolet light absorber (such as homomenthyl N-acetylanthranilate etc); salicylic acid family ultraviolet light absorber (such as amyl salicylate, menthyl salicylate, homomenthyl salicylate, octyl salicylate, phenyl salicylate, benzyl salicylate, p-isopropanolphenyl salicylate, etc); cinnamic acid family ultraviolet light absorber (such as octyl methoxycinnamate, ethyl 4-isopropylcinnamate, methyl 2,5-diisopropylcinnamate, ethyl 2,4-diisopropylcinnamate, methyl 2,4-diisopropylcinnamate, propyl p-methoxycinnamate, isopropyl p-methoxycinnamate, isoamyl p-methoxycinnamate, octyl p-methoxycinnamate (2-ethylhexyl p-methoxycinnamate), 2-ethoxyethyl p-methoxycinnamate, cyclohexyl p-methoxycinnamate, ethyl α -cyano- β -phenylcinnamate, 2-ethylhexyl α -cyano- β -phenylcinnamate, glyceryl mono-2-ethylhexanoyl-diparamethoxy cinnamate, etc); benzophenone family ultraviolet light absorber (such as 2,4-dihydroxybenzophenone, 2,2'-dihydroxy-4-methoxybenzophenone, 2,2'-dihydroxy-4,4'-dimethoxybenzophenone, 2,2',4,4'-tetrahydroxybenzophenone, 2-hydroxy-4-methoxybenzophenone, 2-hydroxy-4-methoxy-4'-methylbenzophenone, 2-hydroxy-4-methoxybenzophenone-5-sulfonate, 4-phenylbenzophenone, 2-ethylhexyl-4'-phenyl-benzophenone-2-carboxylate, 2-hydroxy-4-n-octoxybenzophenone, 4-hydroxy-3-carboxybenzophenone, etc); 3-(4'-methylbenzylidene)-d,l-camphor and 3-benzylidene-d,l-camphor; 2-phenyl-5-methylbenzoxazol; 2,2'-hydroxy-5-methylphenylbenzotriazol, 2-(2'-hydroxy-5'-t-octylphenyl) benzotriazol, 2-(2'-hydroxy-5'-methylphenylbenzotriazol; dibenzalazine; dianisoylmethane; 4-methoxy-4'-t-butylidibenzoylmethane; 5-(3,3-dimethyl-2-norbornylidene)-3-pentane-2-one; dimorpholinopyridazinone; 2-ethylhexyl 2-cyano-3,3-diphenylacrylate; 2,4-bis- {[4-(2-ethylhexyloxy)-2-hydroxy]-phenyl} -6-(4-methoxyphenyl)-(1,3,5)-triazine, and the like.

[0092]

Examples of the sequestrants may include 1-hydroxyethane-1, 1-diphosphonic acid, 1-hydroxyethane, 1-diphosphonic acid 4Na salt, disodium edetate, trisodium edetate, tetrasodium edetate, sodium citrate, sodium polyphosphate, sodium metaphosphate, gluconic acid, phosphoric acid, citric acid, ascorbic acid, succinic acid, edetic acid, trisodium hydroxyethyl ethylenediamine triacetate, and the like.

[0093]

Examples of the amino acid may include neutral amino acid (such as threonine, cysteine, etc); basic amino acid (such as hydroxylysine, etc) and the like. Examples of the amino acid derivative may include sodium acyl sarcosinate (sodium lauroyl sarcosinate), acyl glutamate, sodium acyl β -alanine, glutathione, pyrrolidone carboxylate, and the like.

[0094]

Examples of the organic amine may include monoethanolamine, diethanolamine, triethanolamine, morpholine, triisopropanolamine, 2-amino-2-methyl-1,3-propanediol, 2-amino-2-methyl-1-propanol, and the like.

[0095]

Examples of the polymer emulsion may include acrylic resin emulsion, ethyl polyacrylate emulsion, solution of acrylic resin, polyacrylalkylester emulsion, polyvinyl acetate resin emulsion, natural rubber latex, and the like.

[0096]

Examples of the pH modifier may include buffer such as lactic acid-sodium lactate, citric acid-sodium citrate, succinic acid-sodium succinate, and the like.

[0097]

Examples of the vitamins may include vitamine A, B1, B2, B6, C, E and derivatives thereof, pantothenic acid and derivatives thereof, biotin, and the like.

[0098]

Examples of the anti-oxidant may include tocopherols, dibutyl hydroxy toluene, butyl hydroxy anisole, and gallic acid esters, and the like.

[0099]

Examples of the anti-oxidant aid may include phosphoric acid, citric acid, ascorbic acid, maleic acid, malonic acid, succinic acid, fumaric acid, cephalin, hexamethaphosphate, phytic acid, ethylenediaminetetraacetic acid, and the like.

[0100]

Examples of other containable compositions may include an antiseptic agent (such as ethylparaben, butylparaben, chlorphenesin, 2-phenoxyethanol, etc); antiphlogistic (such as glycyrrhizinic acid derivatives, glycyrrhetic acid derivatives, salicylic acid derivatives, hinokitiol, zinc oxide, allantoin, etc); a skin-whitening agent (such as placental extract, saxifrage extract, arbutin, etc); various extracts (such as phellodendron bark (cork tree bark), coptis rhizome, lithospermum, peony, swertia herb, birch, sage, loquat, carrot, aloe, mallow, iris, grape, coix seed, sponge gourd, lily, saffron, cnidium rhizome, ginger, hypericum, restharrow, garlic, red pepper, citrus unshiu, Japanese angelica, seaweed, etc); an activator (such as royal jelly, photosensitizer, cholesterol derivatives, etc); a blood circulation promotion agent (such as nonyllic acid vanillylamide, nicotine acid benzyl ester, nicotine acid β -butoxyethyl ester, capsaicin, zingerone, cantharides tincture, ichthammol, tannic acid, α -borneol, tocopheryl nicotinate, meso-inositol hexanicotinate, cyclandelate, cinnarizine, tolazoline, acetylcholine, verapamil, cepharanthine, γ -oryzanol, etc); an antiseborrheic agent, (such as sulfur, thianthl, etc); an anti-inflammatory agent (such as tranexamic acid, thiotaurine, hypotaurine, etc), and the like.

[0101]

The composition of the present disclosure further may include, as necessary, caffeine, tannin, verapamil, tranexamic acid and derivatives thereof; various crude drug extracts such as licorice, Chinese quince, *Pyrola japonica* and the like; drugs such as tocopherol acetate, glycyrrhetic acid, glycyrrhizic acid and derivatives thereof, or salts thereof; skin-whitening agents such as vitamin C, magnesium ascorbyl phosphate, ascorbic acid glucoside, arbutin, kojic acid and the like; amino acids such as arginine and lysine and the like and derivatives thereof.

[0102]

[Oily component]

The content by percentage of the oily component is preferably less than 2% by mass, more preferably 1% by mass or less, and further more preferably 0% by mass in the cosmetic composition of the present disclosure. If the content by percentage of the oily component is 2% by mass or more, stickiness may occur and hair-styling capability of the powder tends to be inhibited. By making the amount of the oily component less than 2% by mass, feeling in use such as smoothness can be improved and transparency in appearance can be enhanced, too.

[0103]

Examples of the oily component that may be used may include liquid oils, solid fats, waxes, hydrocarbons, higher fatty acids, higher alcohols, synthetic ester oils, silicone oils, and the like.

[0104]

Examples of the liquid fat that may be used may include avocado oil, camellia oil, turtle oil, macadamia nut oil, corn oil, mink oil, olive oil, rapeseed oil, egg yolk oil, sesame oil, par chic oil, wheat germ oil, southern piece oil, castor oil, linseed oil, safflower oil, cotton seed oil, perilla oil, soybean oil, groundnut oil, brown real oil, torrey oil, rice bran oil, Chinese tung oil, Japanese tung oil, jojoba oil, germ oil, triglycerol, and the like.

[0105]

Examples of the solid fat that may be used may include cacao butter, coconut oil, horse fat, hydrogenated coconut oil, palm oil, beef tallow, sheep tallow, hydrogenated beef tallow, palm kernel oil, lard, beef bones fat, Japan wax kernel oil, hardened oil, hoof oil, Japan wax, hydrogenated castor oil, and the like.

[0106]

Examples of the waxes that may be used may include beeswax, candelilla wax, cotton wax, carnauba wax, bayberry wax, insect wax, spermaceti, montan wax, bran wax, lanolin, kapok wax, lanolin acetate, liquid lanolin, sugarcane wax, lanolin fatty acid isopropyl ester, hexyl laurate, reduced lanolin, jojoba wax, hardened lanolin, shellac wax, POE lanolin alcohol

ether, POE lanolin alcohol acetate, POE cholesterol ether, lanolin fatty acid polyethylene glycol, POE hydrogenated lanolin alcohol ether, and the like.

[0107]

Examples of the hydrocarbon oils that may be used may include liquid paraffin, ozocerite, squalane, pristane, paraffin, ceresin, squalene, vaseline, microcrystalline wax, and the like.

[0108]

Examples of the higher fatty acid that may be used may include lauric acid, myristic acid, palmitic acid, stearic acid, behenic acid, oleic acid, undecylenic acid, tallic acid, isostearic acid, linoleic acid, linolenic acid, eicosapentaenoic acid(EPA), docosahexaenoic acid(DHA) and the like.

[0109]

Examples of a higher alcohol may include a linear alcohol (such as lauryl alcohol, cetyl alcohol, stearyl alcohol, behenyl alcohol, myristyl alcohol, oleyl alcohol, cetostearyl alcohol, and the like); a branched alcohol (such as monostearyl glycerin ether (batyl alcohol), 2-decyltetradecanol, lanolin alcohol, cholesterol, phytosterol, hexyl dodecanol, isostearyl alcohol, octyldodecanol, and the like), and the like.

[0110]

Examples of the synthesis ester oils that may be used may include isopropyl myristate, cetyl octanoate, octyldodecyl myristate, isopropyl palmitate, butyl stearate, hexyl laurate, myristyl myristate, decyl oleate, hexyldecyl dimethyl octanoate, cetyl lactate, myristyl lactate, lanolin acetate, isocetyl stearate, isocetyl isostearate, cholesteryl 12-hydroxy stearate, ethylene glycol di-2-ethyl hexanoate, di-penta erythritol fatty acid ester, N-alkyl glycol monoisostearate, neopentyl glycol dicaprates, diisostearyl malate, glyceryl di-2-heptyl undecanoate, trimethylol propane tri-2-ethyl hexanoate, trimethylol propane triisostearate, pentaerythritol tetra-2-ethyl hexanoate, glyceryl tri-2-ethyl hexanoate, glyceryl trioctanoate, glyceryl triisopalmitate, trimethylol propane triisostearate, cetyl 2-ethylhexanoate, 2-ethylhexyl palmitate, glyceryl trimyristate, glyceride tri-2-heptyl undecanoate, castor oil

fatty acid methyl ester, oleyl oleate, acetoglyceride, 2-heptylundecyl palmitate, diisobutyl adipate, N-lauroyl-L-glutamic acid-2-octyldodecyl ester, di-2-heptylundecyl adipate, ethyl laurate, di-2-ethylhexyl sebacate, 2-hexyldecyl myristate, 2-hexyldecyl palmitate, 2-hexyldecyl adipate, diisopropyl sebacate, 2-ethylhexyl succinate, triethyl citrate, and the like.

[0111]

Examples of the silicone oil that may be used include dimethylpolysiloxane, methylhydrogenpolysiloxane, methylphenylpolysiloxane, stearoxymethylpolysiloxane, polyether-modified organopolysiloxane, fluoroalkyl/polyoxyalkylene co-modified organopolysiloxane, alkyl-modified organopolysiloxane, terminal-modified organopolysiloxane, fluorine-modified organopolysiloxane, amino-modified organopolysiloxane, silicone gel, acrylic silicone, trimethylsiloxysilicic acid, silicone compounds such as silicone RTV rubber, and the like.

[0112]

[Hair-styling resin]

The composition of the present disclosure may further comprise a hair styling resin. The hair styling resin is a polymer that enhances hair styling capability when the composition of the present disclosure is used as a hair styling agent. For example, the hair styling resin may be a polymer having a film forming property.

[0113]

Examples of the hair styling resin that may be used may include an ionic polymer and/or non-ionic polymer. The ionic polymer may be at least one of an anionic polymer, a cationic polymer and an amphoteric polymer. Examples of the hair styling resin may include the polymers listed below, but are not limited thereto.

[0114]

(1) Betaine-based anionic polymers such as methacryloyloxyethylcarboxybetain/alkyl methacrylate copolymer and the like (Yukaformer® 301 of Mitsubishi Chemical Corporation, and the like);

- (2) Vinylpyrrolidone-based polymeric compounds such as polyvinyl pyrrolidone, polyvinyl pyrrolidone/vinyl acetate copolymer, and the like (Luviskol K-90, VA73 of BASF Corporation, and the like),
- (3) Vinyl alcohol-based polymeric compounds such as polyvinyl alcohol, polyvinyl butyral, and the like (Gohsenol® of The Nippon Synthetic Chemical Industry Co., Ltd., Denka Poval® of Denki Kagaku Kogyo Kabushiki Kaisha, and the like);
- (4) Acidic vinyl ether-based polymeric compounds such as vinyl methyl ether/butyl maleate, and the like (Aniere BEM-42S of Osaka Organic Chemical Industry Ltd., Gantrez ES-225 of ISP Corporation, and the like);
- (5) Acrylic acid-based polymer compounds, such as alkyl acrylate/alkyl methacrylate/diacetonacrylamide/methacrylic acid copolymer, alkyl acrylate copolymer, acrylic acid/acrylic acid amide/ethyl acrylate copolymer, and the like (Luvimer 100P, Ultra Hold Strong of BASF Corporation; Dia Hold® HR-200 of Mitsubishi Chemical Corporation; Plus Size® L-53P of Goo Chemical Co., Ltd., and the like);
- (6) Ampholytic acrylic acid-based polymer compounds, such as N-methacryloyloxyethyl-N,N-dimethylammonium- α -N-methylcarboxybetaine/alkyl methacrylate copolymer, Octylacrylamide/Acrylates/Butylaminoethyl Methacrylate Copolymer, etc. (Yukaformer® AM-75 of Mitsubishi Chemical Corporation, Amphomer 28-4910 of Nippon NSC Corporation, and the like);
- (7) Nitrogen-containing cationic polymer compounds, such as hydroxyethyl cellulose dimethyldiallylammonium chloride copolymer, hydroxyethyl cellulose hydroxypropyltrimethylammonium chloride, vinyl pyrrolidone/N,N'-dimethylaminoethylmethacrylic acid copolymer diethyl sulfate solution, dimethyldiallylammonium chloride homopolymer, dimethyldiallylammonium chloride/acrylamide copolymer, etc. (Polymer JR-125 of Amerchol Corporation, Leoguard® GP of Lion Corporation, Celquat L-200 of Nippon NSC Corporation, Gufquat 734 of ISP Corporation, H. C. Polymer 1N of Osaka Organic Chemical Industry Ltd., Merquart 550 of Nalco Company, etc.)

[0115]

The content by percentage of the hair styling resin is preferably 0.1% by mass or more, more preferably 0.3% by mass or more, and further more preferably 0.5% by mass or more with respect to the mass of the composition. If it is less than 0.1% by mass, sufficient hair styling capability may not be achieved. Further, the content by percentage of the hair styling resin is preferably 8% by mass or less, more preferably 5% by mass or less, and further more preferably 3% by mass or less with respect to the mass of the composition. If more than 8% by mass of the hair styling resin is added, stickiness may occur.

[0116]

When the anionic polymers and amphoteric polymers among the above-mentioned hair styling resins are insoluble in water, a part of or a whole of the functional group may be neutralized with an inorganic or organic alkaline agent to change them to be water soluble as necessary.

[0117]

Examples of alkaline agents used for the above-mentioned neutralization process may include hydroxides of alkaline metals such as sodium hydroxide, potassium hydroxide, and the like as inorganic alkaline agents. Further, volatile alkaline agents such as ammonia, morpholine and the like; alkanolamines such as triethanolamine, diethanolamine, isopropanolamine, monoethanolamine, diisopropanolamine, 2-amino-2-methyl-1-propanol, 2-amino-2-methyl-1,3-propanediol, and the like; amino acids such as L-arginine, lysine, and the like may be included as examples.

[0118]

The viscosity of the cosmetic composition of the present disclosure is preferably 1,000 mPa·s or more and more preferably 10,000 mPa·s or more. If it is less than 1,000 mPa·s, easiness of handling the composition by hand will deteriorate. The viscosity of the composition of the present disclosure is preferably 100,000 mPa·s or less. If it exceeds 100,000 mPa·s, filling property to the container, spreadability upon application, and compatibility to hair will deteriorate. The viscosity can be measured by a Brookfield

viscometer (spindle number 6 or 7, rotation speed 10 rpm) at 30 °C.

[0119]

According to the cosmetic composition of the present disclosure, a high hair-styling capability can be achieved. In particular, a voluminous hair-style can be made easily. Furthermore, according to the cosmetic composition of the present disclosure, re-styling capability for setting the hairstyle again when the set hairstyle is collapsed can be enhanced. Furthermore, according to the cosmetic composition of the present disclosure, stickiness that the user feels can be suppressed. Furthermore, according to the cosmetic composition of the present disclosure, squeakiness can be suppressed. Furthermore, according to the cosmetic composition of the present disclosure, aggregation of the silica powder can be suppressed while viscosity is enhanced by the thickener.

[0120]

Methods for producing the cosmetic composition of the present disclosure will be described. The cosmetic composition of the present disclosure can be prepared according to generally known methods, without being limited to a specific method. For example, the cosmetic composition can be prepared by mixing each of the aforementioned components.

EXAMPLES

[0121]

The cosmetic composition of the present disclosure will be described with reference to the following examples. However, the cosmetic composition of the present disclosure is not limited to the following examples. Further, in the following examples, examples that the cosmetic composition in each test example is applied to a hair styling agent are described, but the composition of the present disclosure is not limited to a hair styling agent. The unit of the content by percentage in each table is “% by mass”.

[0122]

A viscosity of each composition was measured. Each composition was evaluated for stability, hair-styling capability, hair-styling capability immediately after application,

re-styling capability, non-stickiness and non-squeakiness. Evaluation for each evaluation item is shown in the table.

[0123]

[Stability]

Dispersion uniformity of components in the composition was evaluated visually.

A: Components were uniformly dispersed, or aggregates were not observed.

B: Evaluation not used.

C: Dispersion of components was obviously not uniform, or obvious aggregates were observed.

[0124]

Three evaluators used the composition according to each test example as a hair styling agent, and evaluated hair-styling capability, hair-styling capability immediately after application, re-styling capability, non-stickiness and non-squeakiness. The evaluators gave points for each evaluation item based on the following criteria, and average points were calculated. Evaluation criteria for each evaluation item are as follows.

[0125]

[Hair-styling capability]

The evaluators evaluated whether they can set their hair in a natural style and keep the hairstyle.

[0126]

[Hair-styling capability immediately after application]

The evaluators spread the composition over their hands, applied it to their hair and evaluated whether they can set their hair immediately after application.

[0127]

[Re-styling capability]

The evaluators evaluated whether they can re-style their hairstyles after one hour from application to hair.

[0128]

[Non-stickiness]

The evaluators evaluated non-stickiness that they felt while they applied the composition to their hair by their hands to style their hair.

[0129]

[Non-squeakiness]

The evaluators evaluated non-squeakiness that they felt while they applied the composition to their hair by their hands to style their hair. Non-squeakiness is smoothness when hair is rubbed with each other or with the hands.

[0130]

[Evaluation criteria]

5 points: Excellent

4 points: Good

3 points: Fair

2 points: Poor

1 point: Very poor

[Evaluation (average point)]

A: 4 points or more

B: 3 points

C: 2 points

D: 1 point

[0131]

[Example 1 and Comparative examples 1 to 2]

Formulations and evaluations of the compositions according to Example 1 and Comparative examples 1 to 2 are shown in Table 1. The composition according to Example 1 comprises an irregular and non-porous fused silica powder having a BET specific surface area of $200 \pm 25 \text{ m}^2/\text{g}$ (catalogue value) and an associative thickener. On the other hand, the composition according to Comparative example 1 does not comprise a silica powder. The composition according to Comparative example 2 comprises a spherical and porous silica

powder having a BET specific surface area of 300 m²/g (catalogue value) instead of the irregular silica powder. The silica powder in Comparative example 2 is porous and it is considered that the specific surface area shown in the catalogue includes the internal specific surface area. Thus, the external specific surface area of the silica powder used in Comparative example 2 is considered to be smaller than that of the silica powder used in Example 1. Example 1 does not comprise an oily component.

[0132]

In the compositions according to Comparative examples 1 and 2, hair-styling capability, hair-styling capability immediately after application and re-styling capability were low. When Comparative examples 1 and 2 are compared, there was no improvement in hair-styling capability, hair-styling capability immediately after application and re-styling capability by adding the silica powder. However, according to the composition of Example 1 that used the irregular silica, hair-styling capability, hair-styling capability immediately after application and re-styling capability were greatly enhanced compared to Comparative examples 1 and 2. Accordingly, it is considered that hair-styling capability, hair-styling capability immediately after application and re-styling capability cannot be enhanced with the silica powder having a small external specific surface area. It is considered that the irregular silica having a large external specific surface area is effective for hair-styling capability, hair-styling capability immediately after application and re-styling capability.

[0133]

Viscosity of the composition according to Example 1 was 5,600 mPa·s.

[0134]

[Table 1]

		Example 1	Comparative Example 1	Comparative Example 2
(1)	Ion-exchanged water	Balance	Balance	Balance
(2)	Irregular silica powder*1	1	-	-
(3)	Spherical silica powder*2	-	-	1
(4)	PEG-240/HDI Copolymer Bis-Decyltetradeceth-20 Ether Copolymer *3	1	1	1
(5)	Glycerin	2	2	2

Total		100	100	100
Viscosity (mPa·s)		5,600	5,000	6,200
Evaluation	Stability	A	A	A
	Hair-styling capability	B	D	D
	Hair-styling capability immediately after application	B	D	D
	Re-styling capability	B	D	D
	Non-stickiness	A	A	A
	Non-squeakiness	B	A	A
*1: AEROSIL200 (EVONIK Industries AG (Nippon Aerosil Co., Ltd.)) *2: Sunsphere L-51 (AGC Si-Tech Co., Ltd) *3: Adekanol GT-700, ADEKA CORPORATION				

[0135]

[Examples 2 to 5]

Formulations and evaluations of the compositions according to Examples 2 to 5 are shown in Table 2. In Example 2, Component (5) which is a hair-styling resin was further added to the composition of Example 1. In Examples 3 to 5, the amounts of the irregular silica powder added were varied.

[0136]

In Example 2, hair-styling capability and re-styling capability were improved compared to Example 1 by adding the hair-styling resin. Consequently, it can be seen that the combination of the irregular silica powder and the hair-styling resin is effective for hair-styling capability and re-styling capability.

[0137]

In Examples 3 and 4, although the amounts of the irregular silica powder were reduced, sufficient hair-styling capability, hair-styling capability immediately after application and re-styling capability were achieved. Consequently, it is considered that the amount of the irregular silica powder is preferably 0.1% by mass or more and more preferably 0.4% by mass or more.

[0138]

In Example 5, even if the amount of the irregular silica powder was increased, hair-styling capability, hair-styling capability immediately after application and re-styling capability were enhanced without deteriorating feeling in use. Consequently, it is considered

that the irregular silica powder can be added up to at least 2.5% by mass.

[0139] Among Examples 2 to 5, stickiness is the most suppressed in Example 2. Consequently, it is considered that the amount of the irregular silica powder is preferably 0.5% by mass to 1.5% by mass to suppress stickiness.

[0140]

Viscosities of the compositions according to Examples 2 to 4 were 4,000 mPa·s to 4,500 mPa·s. Viscosity of the composition according to Example 5 was 7,000 mPa·s.

[0141]

[Table 2]

		Example 2	Example 3	Example 4	Example 5
(1)	Ion-exchanged water	Balance	Balance	Balance	Balance
(2)	Irregular silica powder*1	1	0.2	0.5	2
(3)	PEG-240/HDI Copolymer Bis-Decyltetradeceth-20 Ether Copolymer *3	1	1	1	1
(4)	Glycerin	2	2	2	2
(5)	Polyvinyl pyrrolidone/vinyl acetate copolymer	2	2	2	2
Total		100	100	100	100
Viscosity (mPa·s)		4,300	4,000	4,100	7,000
Evaluation	Stability	A	A	A	A
	Hair-styling capability	A	B	B	A
	Hair-styling capability immediately after application	B	B	B	A
	Re-styling capability	A	B	B	A
	Non-stickiness	A	B	B	B
	Non-squeakiness	B	A	A	B

[0142]

[Examples 6 to 7]

Formulations and evaluations of the compositions according to Examples 6 to 7 are shown in Table 3. In Examples 6 to 7, the amounts of the associative thickeners added were varied.

[0143]

In Example 6, although the amount of the associative thickener was reduced, evaluations were equivalent to those of Examples 1 to 5. Consequently, it is considered that the amount of the associative thickener is preferably 0.3% by mass or more and more preferably 0.5% by

mass or more.

[0144]

In Example 7, even if the amount of the associative thickener was increased, evaluations were equivalent to those of Examples 1 to 5. Consequently, it is considered that the amount of the associative thickener can be added up to at least 2.5% by mass.

[0145]

[Table 3]

		Example 6	Example 7
(1)	Ion-exchanged water	Balance	Balance
(2)	Irregular silica powder*1	1	1
(3)	PEG-240/HDI Copolymer Bis-Decyltetradeceth-20 Ether Copolymer *3	0.5	2
(4)	Glycerin	2	2
(5)	Polyvinyl pyrrolidone/vinyl acetate copolymer	2	2
Total		100	100
Viscosity (mPa·s)		2,200	69,800
Evaluation	Stability	A	A
	Hair-styling capability	A	A
	Hair-styling capability immediately after application	B	A
	Re-styling capability	A	A
	Non-stickiness	B	B
	Non-squeakiness	B	B

[0146]

[Examples 8 to 11 and Comparative examples 3 to 5]

Formulations and evaluations of the compositions according to Examples 8 to 11 and Comparative examples 3 to 5 are shown in Tables 4 and 5. In Example 8, an associative thickener (Component (4)) that is different from the associative thickeners used in Examples 1 to 7 was used. In Example 9, carboxyvinyl polymer and a neutralizer thereof were further added to the composition of Example 7. In Examples 10 and 11, a thickener having a different thickening mechanism from the associative thickener was used in combination with the associative thickener. In Example 10, Component (6), a mineral-based thickener, and Component (7), a polysaccharide-based thickener, were used in combination with the associative thickener. In Example 11, Component (7) was used in combination with the associative thickener. The thickening mechanism of Component (6) is the formation of a

card-house structure. The thickening mechanism of Component (7) is entanglement of polymers. On the other hand, the associative thickener was not added to Comparative examples 3 to 5. In Comparative example 3, the associative thickener was excluded from the composition of Example 7. In Comparative example 4, only Component (6) was used as the thickener. In Comparative example 5, only Component (7) was used as the thickener.

[0147]

In Example 8 that used the associative thickener different from Examples 1 to 7, evaluations were equivalent to those of Examples 1 to 7. Thus, it is considered that the associative thickener is effective to achieve advantages of the irregular silica powders while maintaining good feeling in use.

[0148]

In Comparative examples 4 and 5 to which the associative thickener was not added, stickiness and squeakiness occurred and good feeling in use could not be achieved. It is considered that this was due to an effect of the mineral-based and the polysaccharide based thickeners. Furthermore, deterioration in hair-styling capability was seen in Comparative example 5. In contrast, in Examples 10 and 11 in which the associative thickener was combined, stickiness and squeakiness were suppressed. Furthermore, in Examples 10 and 11, hair-styling capability and hair-styling capability immediately after application were improved, too. Consequently, it is considered that by using the associative thickener together with the mineral-based and/or the polysaccharide based thickener, hair-styling capability and hair-styling capability immediately after application can be improved while suppressing stickiness and squeakiness caused by the mineral-based and the polysaccharide based thickener.

[0149]

From Examples 10 and 11, it is considered that the content by percentage of the mineral-based thickener is 0.5% by mass or more and preferably 0.8% by mass or more. Furthermore, it is considered that the content by percentage of the mineral-based thickener is 2% by mass or less and preferably 1.5% by mass or less. It is considered that the content by

percentage of the polysaccharide-based thickener is 0.05% by mass or more and preferably 0.08% by mass or more. Furthermore, it is considered that the content by percentage of the polysaccharide-based thickener is 1.5% by mass or less and preferably 1% by mass or less.

[0150]

In Comparative example 3 that used only carboxyvinyl polymer as the thickener, the silica powder aggregated and a stable composition could not be obtained. It is considered that this was due to an electrostatic effect of carboxyvinyl polymer. However, in Example 9 that used a combination of the associative thickener and carboxyvinyl polymer, aggregation of the silica powder was suppressed and a stable composition was obtained even if carboxyvinyl polymer was present. Compared to Example 2, hair-styling capability immediately after application was improved by adding carboxyvinyl polymer. Consequently, even in cases where thickeners which make the silica powder aggregate are used, it can be seen that a stable composition that can achieve advantages of the silica powder can be obtained by additionally adding the associative thickener. Furthermore, viscous feeling of the composition increased and usability immediately after application and stability over time were enhanced by adding carboxyvinyl polymer.

[0151]

From Example 9, it is considered that the content by percentage of carboxyvinyl polymer is 0.08% by mass or more and preferably 0.1% by mass or more. Furthermore, it is considered that the content by percentage of carboxyvinyl polymer is 0.5% by mass or less and preferably 0.3% by mass or less.

[0152]

Viscosities of the compositions according to Examples 8 to 11 were 20,000 mPa·s to 45,000 mPa·s.

[0153]

[Table 4]

		Example 8	Example 9	Example 10	Example 11
(1)	Ion-exchanged water	Balance	Balance	Balance	Balance

(2)	Irregular silica powder*1	1	1	1	1
(3)	PEG-240/HDI Copolymer Bis-Decyltetradeceth-20 Ether Copolymer *3	-	1	1.5	1
(4)	Ammonium Acryloyldimethyltaurate/Beheneth-25 Methacrylate Crosspolymer *4	1	-	-	-
(5)	Carboxyvinyl polymer	-	0.2	-	-
(6)	Sodium magnesium silicate *5	-	-	1	-
(7)	Xanthan gum	-	-	0.1	0.5
(8)	Potassium hydroxide	-	0.1	-	-
(9)	Glycerin	2	2	2	2
(10)	Polyvinyl pyrrolidone/vinyl acetate copolymer	2	2	-	-
Total		100	100	100	100
Viscosity (mPa·s)		43,200	35,800	22,900	32,400
Evaluation	Stability	A	A	A	A
	Hair-styling capability	B	B	A	A
	Hair-styling capability immediately after application	A	A	A	A
	Re-styling capability	A	A	A	B
	Non-stickiness	B	B	B	B
	Non-squeakiness	B	B	B	B
*4: Aristoflex HMB Clariant (Japan) KK					
*5: LAPONITE XLG BYK Japan KK					

[0154]

[Table 5]

		Comparative example 3	Comparative example 4	Comparative example 5
(1)	Ion-exchanged water	Balance	Balance	Balance
(2)	Irregular silica powder*1	1	1	1
(3)	PEG-240/HDI Copolymer Bis-Decyltetradeceth-20 Ether Copolymer *3	-	-	-
(4)	Ammonium Acryloyldimethyltaurate/Beheneth-25 Methacrylate Crosspolymer *4	-	-	-
(5)	Carboxyvinyl polymer	0.2	-	-
(6)	Sodium magnesium silicate *5	-	3	-
(7)	Xanthan gum	-	-	0.5
(8)	Potassium hydroxide	0.1	-	-
(9)	Glycerin	2	2	2
(10)	Polyvinyl pyrrolidone/vinyl acetate copolymer	2	2	2
Total		100	100	100
Viscosity (mPa·s)		-	17,200	3,500

Evaluation	Stability	C	A	A
	Hair-styling capability	-	B	C
	Hair-styling capability immediately after application	-	B	B
	Re-styling capability	-	B	B
	Non-stickiness	-	C	D
	Non-squeakiness	-	D	C

[0155]

The cosmetic composition of the present invention has been described based on the above-mentioned embodiments and examples, but it is not limited thereto and can encompass various modifications, changes and improvements in each disclosed matter (including matters cited in the claims, descriptions, and drawings) within the scope of the present invention and on the basis of the basic technical idea of the present invention. Further, various combinations, substitutions and selections of each disclosed matter are possible within the scope of the claims of the present invention.

[0156]

Further problems, objects and embodiments (including modifications) of the present invention will become apparent from the entire disclosure of the present invention including the claims.

[0157]

As for the numerical ranges disclosed herein, it should be understood that any numbers and ranges falling within the afore-mentioned range are specifically disclosed herein even if they are not particularly stated.

INDUSTRIAL APPLICABILITY

[0158]

The cosmetic composition of the present disclosure can preferably be used in hair styling agents. The composition of the present disclosure can preferably be used in cosmetics and skin external agents that are applied to or rubbed onto skin or hair.

CLAIMS

[Claim 1] A cosmetic composition comprising:

an irregular silica powder; and

an associative thickener.

[Claim 2] The cosmetic composition according to claim 1, wherein the silica powder has a BET specific surface area (excluding an internal surface area).of 50 m²/g or more.

[Claim 3] The cosmetic composition according to claim 1 or 2, wherein the content by percentage of the silica powder is 0.1% by mass to 3% by mass with respect to the mass of the cosmetic composition.

[Claim 4] The cosmetic composition according to any one of claims 1 to 3, wherein the associative thickener is a hydrophobically modified polyether urethane and/or a taurate-based synthetic polymer.

[Claim 5] The cosmetic composition according to claim 4, wherein the hydrophobically modified polyether urethane has a following structural formula (I).



[In the formula (I), R¹, R² and R⁴ are each independently a hydrocarbon group having 2 to 4 carbon atoms;

R³ is a hydrocarbon group having 1 to 10 carbon atoms which may have a urethane bond;

R⁵ is a hydrocarbon group having 8 to 36 carbon atoms;

m is a number of 2 or more;

h is a number of 1 or more;

k is a number of 1 to 500; and

n is a number of 1 to 200]

[Claim 6] The cosmetic composition according to claim 4 or 5, wherein the hydrophobically modified polyether urethane is PEG-240/HDI Copolymer Bis-Decyltetradeceth-20 Ether Copolymer.

[Claim 7] The cosmetic composition according to claim 4, wherein the taurate-based synthetic polymer is a polymer and/or a copolymer (including a crosslinked polymer) having

2-acrylamido-2-methylpropanesulphonic acid or a salt thereof as a constituent unit.

[Claim 8] The cosmetic composition according to claim 4 or 7, wherein the taurate-based synthetic polymer is Ammonium Acryloyldimethyltaurate/Beheneth-25 Methacrylate Crosspolymer.

[Claim 9] The cosmetic composition according to any one of claims 1 to 8, wherein the content by percentage of the associative thickener is 0.3% by mass to 3% by mass with respect to the mass of the cosmetic composition.

[Claim 10] The cosmetic composition according to any one of claims 1 to 9 further comprising:

0.1% by mass to 0.5% by mass of carboxyvinyl polymer with respect to the mass of the cosmetic composition.

[Claim 11] The cosmetic composition according to any one of claims 1 to 10, wherein the content by percentage of an oily component is less than 2% by mass.

[Claim 12] The composition according to any one of claims 1 to 11, wherein the composition has the viscosity of 1,000 mPa·s to 100,000 mPa·s.