

【DESCRIPTION】**【Invention Title】****COSMETIC COMPOSITION****【Technical Field】**

5 **【1】** The present invention relates to a cosmetic composition, and more particularly, to a cosmetic composition having improved stability and dispersibility by using isopropyl alcohol, and any one or two or more co-solvents selected from polyol and C6-C20 isoparaffin.

10 **【Background Art】**

【2】 Recently, the number of women putting on their make-up is rapidly increasing due to an increase of social activities of women, and accordingly various demands for cosmetics are increasing.

15 **【3】** In general, a make-up cosmetic is composed of oily components, powders, waxes, and aqueous components.

【4】 Powder, which is one of components constituting the make-up cosmetic, is a component that is indispensably used, is used to provide colors and to cover skin imperfections,
20 and may be classified into an extender pigment such as talc, mica, sericite, boron nitride, nylon, silica, polymethylmethacrylate, or the like, constituting a formulation, white pigment such as titanium dioxide, zinc oxide, or the like, excellent in hiding power of skin

imperfections, vegetable powder such as ramie cellulose or wood pulp, iron oxides such as black iron oxide, etc., and coloring pigments that emit colors such as dark blue, Yellow No. 5 aluminum lake, chromium oxide, ultramarine, statutory tar colors, and the like.

[5] Depending on the kind of the powders included in the make-up cosmetic, aggregation due to re-agglomeration occurs or adhesiveness is deteriorated, which may deteriorate consistency of the make-up and lower moldability of the powder.

[6] In addition, there are various problems even in a process of preparing the make-up cosmetic.

[7] A pressing process is a compression method using oil and wax as a binder, and generally limits a binder content. This is disadvantageous in that when an excessive content of the binder is contained, since a hardness of a product increases, payoff and spreadability are lowered, and a powder is not uniformly dispersed. In a product using an excessive content of pearl, a pearlescent effect is expressed to be lower than a content of pearl used, and when an excessive content of oil is used as a binder in order to ensure moldability, stains or cracks may occur on a surface of a molded article.

[8] On the other hand, when a powder is prepared by a wet

process, it is advantageous in that even when a binder is used in an excess content, the powder is able to be uniformly dispersed without a caking phenomenon, but it is disadvantageous in that stability of a formulation is lowered and a cracking phenomenon may occur in a drying process.

[9] Korean Patent Laid-Open Publication No. 2009-0126031 suggests a method of using a water-in-oil emulsion as a binder in order to simultaneously solve hard texture and powder scattering of a conventional press formulation. However, it is still necessary to study a cosmetic composition suitable for various needs.

【Disclosure】

【Technical Problem】

[10] An object of the present invention is to provide a cosmetic composition including a powder mixture containing a powder component, isopropyl alcohol and a co-solvent.

【Technical Solution】

[11] The present invention provides a cosmetic composition, and more particularly, a cosmetic composition having increased dispersibility and stability while simultaneously having improved skin adhesiveness and glossiness.

[12] In one general aspect, there is provided a cosmetic composition including: a powder mixture containing a powder

component, isopropyl alcohol, and a co-solvent, wherein the co-solvent is any one or two or more selected from polyol and C6-C20 isoparaffin.

[13]

5 **[14]** The polyol may be inositol, mannitol, xylitol, glycerin, sorbitol, pentyl glycol, 1,3-butylene glycol, propylene glycol, dipropylene glycol or glycerin, and the C6-C20 isoparaffin may be C7-8 isoparaffin, C8-9 isoparaffin, C9-11 isoparaffin, C9-13 isoparaffin, C9-14
10 isoparaffin, C10-11 isoparaffin, C11-12 isoparaffin, C11-13 isoparaffin, C12-14 isoparaffin, C13-14 isoparaffin or C13-16 isoparaffin.

[15] The isopropyl alcohol and the co-solvent may be included in a content of 30 to 80 wt% based on the total
15 cosmetic composition, and a weight ratio of the isopropyl alcohol and the co-solvent may be 7 to 9.5 : 3 to 0.5.

[16] The co-solvent may be a mixed solvent of polyol and C6-C20 isoparaffin, and a weight ratio of the polyol and the C6-C20 isoparaffin may be 4 to 7 : 6 to 3.

20 **[17]** The powder component of the powder mixture may be talc, silica, organic spherical powder, iron oxide, and pearl, and the powder mixture may further include a binder component.

【Advantageous Effects】

[18] The cosmetic composition of the present invention is excellent in dispersibility and has very high volume adhesiveness, sense of touch, and glossiness.

[19] In addition, the cosmetic composition of the present invention has no stains or cracks on a surface of the cosmetic composition during formulation, and thus molding stability is high and powder scattering is low.

【Best Mode】

[20] The present invention provides a cosmetic composition capable of being formulated by various processes and having high skin adhesiveness, sense of touch, and color development power while simultaneously having high molding stability.

[21] The cosmetic composition of the present invention includes a powder mixture containing a powder component, isopropyl alcohol, and a co-solvent, wherein the co-solvent is any one or two or more selected from polyol and C6-C20 isoparaffin.

[22] The cosmetic composition of the present invention is prepared by using isopropyl alcohol as a main solvent and using any one or two or more co-solvents selected from polyol and C6-C20 isoparaffin, thereby overcoming low dispersibility and glossiness in the conventional press process.

[23] Specifically, a general press process has disadvantages in that when an excessive content of binder is contained, due to an increase in a hardness of a product, payoff and spreadability are lowered and a powder is not
5 uniformly dispersed, and thus a content of the binder is limited. Due to the limitation of the binder content, a pearlescent effect is lowered even when pearl is used in an excessive content, and when an excessive content of oil is used as a binder in order to ensure moldability, stains or
10 cracks may occur on a surface of a molded article.

[24] Accordingly, a wet process has been proposed as a process to overcome the disadvantages of the press process. When a product is prepared by the wet process, it is advantageous in that even when a binder is used in an
15 excess content, the powder is uniformly dispersed without a caking phenomenon, and a smooth texture is able to be implemented, but it is disadvantageous in that formulation stability may be lowered and a cracking phenomenon may occur in a drying process.

20 [25] Thus, the present inventors attempted to overcome the above-described disadvantages by using isopropyl alcohol as a main solvent together with any one or two or more solvents selected from polyol and C6-C20 isoparaffin in order to overcome the disadvantages while maintaining the

advantages of the wet process as they are.

[26] By using the isopropyl alcohol as the main solvent, an advantage of easy evaporation without leaving stains on a surface during formulation may be maintained, porosity in
5 the powder may be reduced to increase stability of the formulation, and a powder scattering phenomenon during the payoff may be minimized.

[27] In addition, according to the present invention, by using isopropyl alcohol as the main solvent together with
10 at least one solvent selected from polyol and C6-C20 isoparaffin as the co-solvent, it is possible to achieve stability of the formulation due to a high volatilization rate of the isopropyl alcohol which is the main solvent, and to remarkably alleviate a cracking phenomenon during
15 the drying process.

[28] Preferably, the cosmetic composition of the present invention may be used for a wet process and an injection process.

[29] As the cosmetic composition for a wet process or an
20 injection process of the present invention is applied to a wet process and an injection process, the powder is uniformly dispersed without causing a caking phenomenon even when the binder is used in an excess content, a high pearlescent effect is expressed on an appearance compared

to an input pearl content due to an effect in which powder particles are rearranged by the isopropyl alcohol and the co-solvent, and a smooth texture due to pores between the powder caused by a moisture absorption process is provided.

5 [30] The cosmetic composition of the present invention remarkably increases glossiness, skin adhesiveness and formulation stability by mixing isopropyl alcohol which is hydrophilic as a volatile solvent with a co-solvent which is hydrophobic. In this respect, the polyol according to
10 an embodiment of the present invention may be inositol, mannitol, xylitol, glycerin, sorbitol, pentyl glycol, 1,3-butylene glycol, propylene glycol, dipropylene glycol or glycerin, and preferably, pentyl glycol, 1,3-butylene glycol, propylene glycol or dipropylene glycol.

15 [31] The C6-C20 isoparaffin according to an embodiment of the present invention is an isoparaffin having 6 to 20 carbon atoms, and specifically may be C7-8 isoparaffin, C8-9 isoparaffin, C9-11 isoparaffin, C9-13 isoparaffin, C9-14 isoparaffin, C10-11 isoparaffin, C11-12 isoparaffin, C11-13 isoparaffin, C12-14 isoparaffin, C13-14 isoparaffin or C13-
20 16 isoparaffin, and preferably C10-11 isoparaffin, C11-12 isoparaffin, C11-13 isoparaffin, C12-14 isoparaffin, C13-14 isoparaffin or C13-16 isoparaffin.

[32] A weight ratio (wt% ratio) of the isopropyl alcohol

and the co-solvent according to an embodiment of the present invention may be 7 to 9.5 : 3 to 0.5, and preferably 8 to 9 : 2 to 1 in view of glossiness, skin adhesiveness, and formulation stability.

5 [33] The co-solvent according to an embodiment of the present invention may be a mixed solvent of the polyol and the isoparaffin, and a weight ratio of the polyol and the isoparaffin may be 4 to 7 : 6 to 3, and preferably 5 to 6 : 4 to 5.

10 [34] Preferably, the cosmetic composition according to an embodiment of the present invention may include a powder mixture containing a powder component, isopropyl alcohol, and polyol and C6-C20 isoparaffin, and a preferred combination in view of an increase in high dispersibility
15 without caking even when an excessive content of binder is used while increasing glossiness and formulation stability, may be a combination of pentyl glycol, 1,3-butylene glycol or propylene glycol as the polyol and C10-11 isoparaffin, C11-12 isoparaffin, C11-13 isoparaffin, or C12-14
20 isoparaffin as the isoparaffin.

[35] The cosmetic composition of the present invention may preferably be a make-up cosmetic composition, and the make-up cosmetic composition means a whole range recognizable by a person skilled in the art, and includes eye shadow

blusher, etc., as specific examples thereof.

[36] The isopropyl alcohol and the co-solvent according to an embodiment of the present invention may be included in a content of 30 to 80 wt% with respect to the total cosmetic composition, and preferably may be included in a content of 40 to 70 wt% in order to improve dispersibility and stability.

[37] The powder mixture according to an embodiment of the present invention includes a powder component, and specifically, the powder component may include an extender pigment, a colored pigment, a pearl pigment, a white pigment, etc., as a make-up powder, and may be talc, silica, organic spherical powder, iron oxide, and pearl.

[38] The powder mixture of the present invention may further include a binder component. Examples of the binder component may include silicone-based oil, hydrocarbon-based oil, high fatty acid-based oil, ester-based oil, glyceride-based oil, vegetable-based oil, etc.

[39] The powder mixture according to an embodiment of the present invention may further include an additive conventionally used in the art. Examples of the additive may include a stabilizer, an emulsifier, a thickener, a moisturizer, a liquid crystal film reinforcing agent, a pigment, a perfumer, etc.

[40] Hereinafter, a method for preparing a cosmetic composition of the present invention will be described in detail.

[41] The method for preparing a cosmetic composition of the present invention includes preparing a powder mixture
5 containing a powder component; and dispersing the powder mixture in isopropyl alcohol and a co-solvent to prepare a cosmetic composition.

[42] The cosmetic composition of the present invention may
10 be applied to a wet process for supplying a cosmetic composition in a slurry form to a molding plate, or the like, through a nozzle or to an injection process for injection molding a cosmetic composition in a paste state. In the cosmetic composition of the present invention, the
15 isopropyl alcohol and the co-solvent may be used to prevent stains or cracks on a surface of the molded article, and the co-solvent, i.e., polyol, isoparaffin, and mixed solvent thereof may reduce the volatilization rate of the isopropyl alcohol to enhance the stability of the
20 formulation, and the co-solvent may be coated on the powder, thereby increasing skin adhesiveness while simultaneously increasing the glossiness.

[43]

[44] Hereinafter, the present invention will be described

in detail with reference to the following Examples. However, these Examples are only provided to illustrate the present invention and should not be construed as limiting the scope of the present invention.

5 **[45]** [Examples 1 to 3 and Comparative Examples 1 to 3]
Preparation of eye shadow (high lighter) cosmetic composition

10 **[46]** Powder components shown in Table 1 below were mixed to prepare a powder component mixture. In addition, binder components shown in Table 1 below were mixed and then heated to 70 to 80°C to prepare a binder component mixture. The prepared binder component mixture was sprayed onto the powder component mixture and pulverized to prepare a powder mixture.

15 **[47]** 80 parts by weight of a mixed solvent prepared according to a weight ratio shown in Table 2 below was dispersed in 100 parts by weight of the powder mixture prepared above, thereby being prepared in a slurry phase. The prepared slurry phase in a predetermined content was
20 filled in a molding plate by using a nozzle and dried at 45 to 50°C for 10 hours to remove the solvent, thereby preparing eye shadow make-up cosmetics of Examples 1 to 3 and Comparative Examples 1 to 3.

[48] **[Table 1]**

Classification	No.	Component	Content (wt%)
Powder component	1	Talc	Balance (to 100)
	2	Silica	3.0
	3	Organic spherical powder	4.0
	4	Iron oxide	1.0
	5	Pearl	50.0
Binder component	6	Phenyl trimethicone	3.0
	7	Butyleneglycol dicaprylate/dicaprate	8.0
	8	Diisostearyl malate	4.0
	9	Polyglyceryl-4isostearate * Cetyl PEG/PPG-10/1 dimethicone * hexyllaurate	2.0
	10	Dimethicone	0.8

[49] 【Table 2】

Component	Example			Comparative Example		
	1	2	3	1	2	3
Isopropyl alcohol (wt%)	90.0	90	90	-	100.0	80.0
Ethanol(wt%)	-	-	-	-	-	20.0
C10-11 isoparaffin	10.0	-	5.0	-	-	-

(wt%)						
Propylene glycol (wt%)	-	10	5.0	-	-	-

[50]

[51] [Evaluation of skin adhesiveness, sense of touch, appearance color and color development power on prepared make-up cosmetics]

5 **[52]** To evaluate the skin adhesiveness, sense of touch, appearance color, and color development power of the make-up cosmetics of Examples 1 to 3 and Comparative Examples 1 to 3, the same lotion was applied on the same object to make a skin condition as equal as possible. Then, the

10 makeup cosmetics of Examples 1 to 3 and Comparative Examples 1 to 3 prepared in the present invention were subjected to payoff three times with the same eye shadow tip, and results of the skin adhesiveness, appearance color, and color development power, by the five-point measurement

15 were averaged and shown in Table 3 below. The measurement was performed for five women in their twenties.

[53]

[54] [Evaluation of molding stability and injection property on prepared make-up cosmetics]

20 **[55]** In order to examine injection property of the makeup cosmetics of Examples 1 to 3 and Comparative Examples 1 to

3, an appearance through an injection molding machine was observed. When a binding force was lowered, it was split and injected, and when a binder content was excessively high or the compatibility was not suitable, the solvent was detached and the cosmetics were not injected.

[56] In addition, molding stability was confirmed by dropping a molded article at a height of 30 cm and measuring a crack degree.

[57] 【Table 3】

Item	Example 1	Example 2	Example 3	Compara tive Example 1	Compara tive Example 2	Compara tive Example 3
Adhesiveness	5	5	5	3	4	4
Sense of touch	4	3	5	3	5	4
Appearance color	5	5	5	3	5	3
Color development power	4	3	5	3	5	4
Molding stability	5	5	5	5	4	3

Glossiness	4	3	5	3	5	4
Injection property	5	5	5	-	3	X

[58] 5: Very good, 4: Good, 3: Normal, X: Very bad

[59] As shown in Table 3, the cosmetic composition of the present invention includes the isopropyl alcohol and the co-solvent to have an excellent pearlescent effect through particle rearrangement of pearl-containing powder components, thereby having an excellent glossiness as compared to those of Comparative Examples 1 to 3.

[60] Further, it may be appreciated that the cosmetic composition of the present invention may have high stability and injection property while being excellent in skin adhesiveness and sense of touch as compared to those of Comparative Examples.

[61] In other words, since the cosmetic composition of the present invention has high dispersibility and stability, it may be supplied in a slurry state or in a paste state to thereby be easily applied to a wet process and an injection process, and thus it is possible to mold three-dimensional pattern to improve attractive appearance.

【CLAIMS】**【Claim 1】**

A cosmetic composition comprising:

a powder mixture containing a powder component,

5 isopropyl alcohol, and

a co-solvent,

wherein the co-solvent is any one or two or more
selected from polyol and C6-C20 isoparaffin.

10 **【Claim 2】**

The cosmetic composition of claim 1, wherein the
polyol is inositol, mannitol, xylitol, glycerin, sorbitol,
pentyl glycol, 1,3-butylene glycol, propylene glycol,
dipropylene glycol or glycerin.

15

【Claim 3】

The cosmetic composition of claim 1, wherein the
isoparaffin is C7-8 isoparaffin, C8-9 isoparaffin, C9-11
isoparaffin, C9-13 isoparaffin, C9-14 isoparaffin, C10-11
20 isoparaffin, C11-12 isoparaffin, C11-13 isoparaffin, C12-14
isoparaffin, C13-14 isoparaffin or C13-16 isoparaffin.

【Claim 4】

The cosmetic composition of claim 1, wherein the

isopropyl alcohol and the co-solvent are included in a content of 30 to 80 wt% based on the total cosmetic composition.

5 **【Claim 5】**

 The cosmetic composition of claim 1, wherein a weight ratio of the isopropyl alcohol and the co-solvent is 7 to 9.5 : 3 to 0.5.

10 **【Claim 6】**

 The cosmetic composition of claim 1, wherein the co-solvent is a mixed solvent of polyol and C6-C20 isoparaffin.

【Claim 7】

15 The cosmetic composition of claim 6, wherein a weight ratio of the polyol and the isoparaffin is 4 to 7 : 6 to 3.

【Claim 8】

20 The cosmetic composition of claim 1, wherein the powder mixture further includes a binder component.

【Claim 9】

 The cosmetic composition of claim 1, wherein the powder component is talc, silica, organic spherical powder,

iron oxide, and pearl.