

【DESCRIPTION】

【Invention Title】

COMPOSITION FOR SKIN MOISTURIZING OR SKIN WHITENING
CONTAINING PENTACYCLIC TRITERPENE CAFFEIC ACID ESTERS

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【Technical Field】

The present disclosure relates to a composition for skin moisturizing or skin whitening, which contains a pentacyclic triterpene caffeic acid ester as an active ingredient.

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【Background Art】

It is known that a hibisci cortex extract has anti-aging, skin whitening and skin moisturizing effects. For pentacyclic triterpene caffeic acid esters contained in the hibisci cortex extract, the effect of inhibiting lipid peroxidation and the toxic effect on cancer cells are known. However, nothing is known about the skin moisturizing or skin whitening effect of the pentacyclic triterpene caffeic acid esters when they are used, for example, in cosmetic compositions.

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The inventors of the present disclosure have studied on the skin moisturizing and skin whitening effects of the pentacyclic triterpene caffeic acid esters and have completed the present disclosure.

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【References of Related Art】

【Patent Documents】

Korean Patent Publication No. 10-2010-0059302.

Korean Patent Publication No. 10-2001-0010240.

Chinese Patent Publication No. CN103342730A.

5 Japanese Patent Publication No. 2007-051101.

【Disclosure】

【Technical Problem】

The inventors of the present disclosure have studied on pentacyclic
10 triterpene caffeic acid esters and have found out that the pentacyclic triterpene
caffeic acid esters have skin moisturizing and skin whitening effects.

In an aspect, the present disclosure is directed to providing a composition for
skin moisturizing or skin whitening, which contains a pentacyclic triterpene caffeic
acid ester as an active ingredient.

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【Technical Solution】

In an aspect, the present disclosure provides a composition for skin
moisturizing, which contains one or more of 3 β ,23,28-trihydroxy-12-oleanene 23-
caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof; and
20 3 β ,23,28-trihydroxy-12-oleanene 3 β -caffeate, a salt thereof, an isomer thereof, a
hydrate thereof or a solvate thereof, as a pentacyclic triterpene caffeic acid ester, as
an active ingredient.

In an aspect, the present disclosure provides a composition for skin

whitening, which contains one or more of 3 β ,23,28-trihydroxy-12-oleanene 23-caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof; and 3 β ,23,28-trihydroxy-12-oleanene 3 β -caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof, as a pentacyclic triterpene caffeic acid ester, as
5 an active ingredient.

In an aspect of the present disclosure, the active ingredient is 3 β ,23,28-trihydroxy-12-oleanene 23-caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof.

In an aspect of the present disclosure, the active ingredient is 3 β ,23,28-
10 trihydroxy-12-oleanene 3 β -caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof.

In an aspect of the present disclosure, the active ingredient is contained in an amount of 0.0001-1 wt% based on the total weight of the composition.

In an aspect of the present disclosure, the composition contains 3 β ,23,28-
15 trihydroxy-12-oleanene 23-caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof; and 3 β ,23,28-trihydroxy-12-oleanene 3 β -caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof.

In an aspect of the present disclosure, the composition contains 3 β ,23,28-trihydroxy-12-oleanene 23-caffeate, a salt thereof, an isomer thereof, a hydrate
20 thereof or a solvate thereof; and 3 β ,23,28-trihydroxy-12-oleanene 3 β -caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof at a weight ratio of 1 : 0.5-1.5.

In an aspect of the present disclosure, the composition for skin moisturizing further contains a ceramide.

25 In an aspect of the present disclosure, the composition is a composition for

external application to skin.

In an aspect of the present disclosure, the composition is a cosmetic composition.

5 **【Advantageous Effects】**

A composition according to an aspect of the present disclosure has a superior skin moisturizing effect.

The composition according to an aspect of the present disclosure has a superior skin whitening effect.

10 The composition according to an aspect of the present disclosure has a superior effect of promoting expression of hyaluronic acid synthase when applied to skin.

The composition according to an aspect of the present disclosure has a superior effect of promoting expression of caspase 14 when applied to skin.

15 The composition according to an aspect of the present disclosure has a superior effect of reducing melanin content when applied to skin.

【Brief Description of Drawings】

20 Fig. 1 and Fig. 2 show results of evaluating expression of HAS and caspase 14 in Test Example 1 of the present disclosure.

Fig. 3 shows immunofluorescence microscopic images obtained in Test Example 2 of the present disclosure.

Fig. 4 shows a result of evaluating skin whitening effect in Test Example 3 of the present disclosure.

【Best Mode】

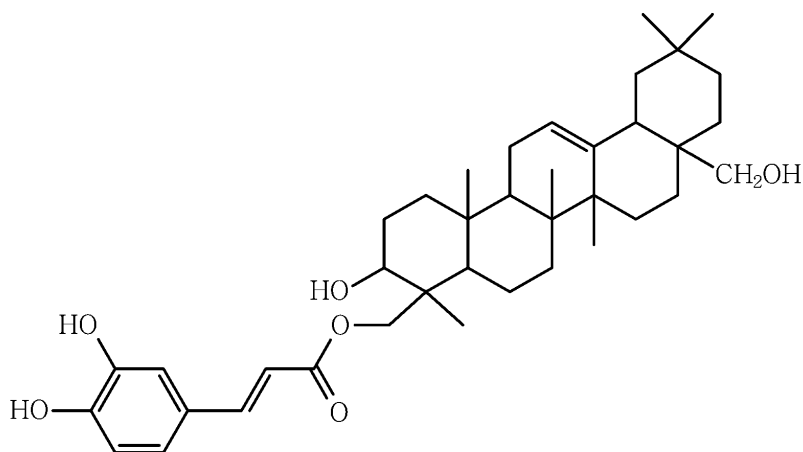
Hereinafter, the present disclosure is described in detail.

In an aspect, the present disclosure provides a composition for skin
5 moisturizing, which contains one or more of $3\beta,23,28$ -trihydroxy-12-oleanene 23-
caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof; and
 $3\beta,23,28$ -trihydroxy-12-oleanene 3β -caffeate, a salt thereof, an isomer thereof, a
hydrate thereof or a solvate thereof, as a pentacyclic triterpene caffeic acid ester, as
an active ingredient.

10 In an aspect, the present disclosure provides a composition for skin
whitening, which contains one or more of $3\beta,23,28$ -trihydroxy-12-oleanene 23-
caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof; and
 $3\beta,23,28$ -trihydroxy-12-oleanene 3β -caffeate, a salt thereof, an isomer thereof, a
hydrate thereof or a solvate thereof, as a pentacyclic triterpene caffeic acid ester, as
15 an active ingredient.

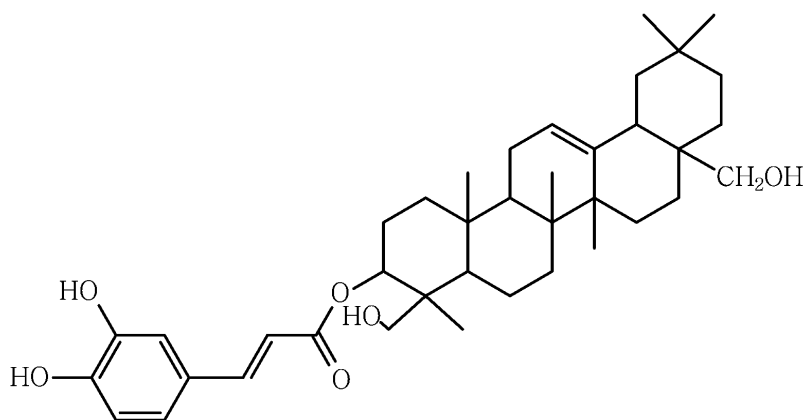
In an aspect of the present disclosure, the $3\beta,23,28$ -trihydroxy-12-oleanene
23-caffeate may be represented by Chemical Formula 1. The compound of
Chemical Formula 1 has a CAS No. 226406-74-2.

[Chemical Formula 1]



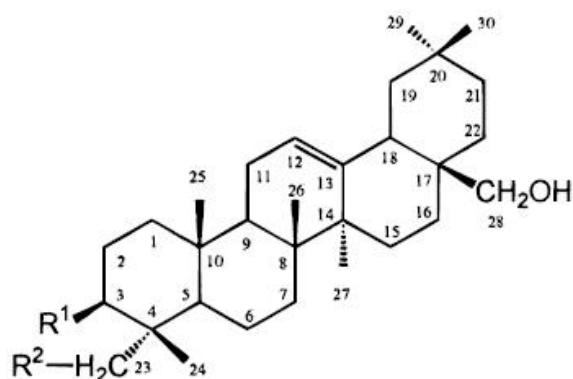
In an aspect of the present disclosure, the 3 β ,23,28-trihydroxy-12-oleanene 3 β -caffeate may be represented by Chemical Formula 2 . The compound of Chemical Formula 2 has a CAS No. 226406-72-0.

5 [Chemical Formula 2]

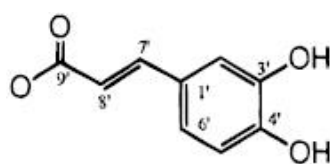


In an aspect of the present disclosure, the 3 β ,23,28-trihydroxy-12-oleanene 23-caffeate may be represented by Chemical Formula 3, wherein R¹ is -OH and R² is represented by Chemical Formula 4.

10 [Chemical Formula 3]



[Chemical Formula 4]



In an aspect of the present disclosure, in the 3 β ,23,28-trihydroxy-12-
 5 oleanene 3 β -caffeate represented by Chemical Formula 3, R¹ may be represented
 by Chemical Formula 4 and R² may be -OH.

In the present disclosure, the 3 β ,23,28-trihydroxy-12-oleanene 23-caffeate of
 Chemical Formula 1 or the 3 β ,23,28-trihydroxy-12-oleanene 3 β -caffeate of Chemical
 Formula 2 may be derived from hibisci cortex. In the present disclosure, the “hibisci
 10 cortex” refers to the dried root bark or stem bark of rose of Sharon (*Hibiscus syriacus*
 L.), which is a deciduous shrub in the family Malvaceae. The root bark or stem bark
 is peeled off and dried under the sun in spring. It tastes sweet and bitter and has a
 neutral characteristic. It acts on the liver, spleen, large intestine and small intestine.
 It clears away heat and toxins, eliminates dampness and stops itching. In addition,
 15 it helps blood circulation and stops bleeding. It is used for enterohemorrhage,
 dysentery, rectal prolapse, leucorrhea, scabies, athlete’s foot, hemorrhoid, etc. 3-9
 g a day is taken as an infusion or applied externally after being boiled down with
 water or brewed in liquor.

In the present disclosure, the "isomer" includes not only optical isomers (e.g., essentially pure enantiomers, essentially pure diastereomers or mixtures thereof) but also conformational isomers (i.e., isomers differing only in angles of one or more chemical bonds), constitutional isomers (especially, tautomers) or geometric isomers (e.g., cis-trans isomers).

In the present disclosure, "essentially pure" means, for example, when used in connection with enantiomers or diastereomers, that the specific compound as an example of the enantiomer or the diastereomer is present in an amount of about 90% (w/w) or more, specifically about 95% or more, more specifically about 97% or more or about 98% or more, further more specifically about 99% or more, even more specifically about 99.5% or more.

In the present disclosure, the "hydrate" refers to a compound bound with water. It is used in a broad sense, including an inclusion compound which lacks chemical bonding between water and the compound.

In the present disclosure, the "solvate" refers to a higher-order compound formed between a solute molecule or ion and a solvent molecule or ion.

In an aspect of the present disclosure, the active ingredient may be 3 β ,23,28-trihydroxy-12-oleanene 23-cafeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof.

In an aspect of the present disclosure, the active ingredient may be 3 β ,23,28-trihydroxy-12-oleanene 3 β -cafeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof.

In an aspect of the present disclosure, the active ingredient may be contained in an amount of 0.0001-1 wt% based on the total weight of the composition. Specifically, the composition for skin moisturizing or the composition

for skin whitening may contain the active ingredient in an amount of 0.0001 wt% or more, 0.0003 wt% or more, 0.0004 wt% or more, 0.0005 wt% or more, 0.0006 wt% or more, 0.0007 wt% or more, 0.0008 wt% or more, 0.001 wt% or more, 0.0012 wt% or more, 0.0015 wt% or more, 0.002 wt% or more, 0.005 wt% or more, 0.01 wt% or more, 0.05 wt% or more, 0.1 wt% or more, 0.2 wt% or more, 0.3 wt% or more, 0.4 wt% or more, 0.5 wt% or more or 0.7 wt% or more based on the total weight of the composition. And, the composition for skin moisturizing or the composition for skin whitening may contain the active ingredient in an amount of 1 wt% or less, 0.5 wt% or less, 0.1 wt% or less, 0.05 wt% or less, 0.01 wt% or less, 0.005 wt% or less, 0.004 wt% or less, 0.003 wt% or less, 0.002 wt% or less, 0.001 wt% or less, 0.0008 wt% or less or 0.0005 wt% or less based on the total weight of the composition. A superior skin moisturizing or skin whitening effect is obtained when the content of the active ingredient is within the above-described range.

In an aspect of the present disclosure, the composition may contain 3 β ,23,28-trihydroxy-12-oleanene 23-cafeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof; and 3 β ,23,28-trihydroxy-12-oleanene 3 β -cafeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof.

In an aspect of the present disclosure, the 3 β ,23,28-trihydroxy-12-oleanene 23-cafeate and the 3 β ,23,28-trihydroxy-12-oleanene 3 β -cafeate may be contained at a weight ratio of 1 : 0.5-1.5. Specifically, the 3 β ,23,28-trihydroxy-12-oleanene 23-cafeate and the 3 β ,23,28-trihydroxy-12-oleanene 3 β -cafeate may be contained at a weight ratio of 1 : 0.6-1.4, 1 : 0.8-1.3, 1 : 0.9-1.2, 1 : 0.9-1.1 or 1 : 1. A superior skin moisturizing or skin whitening effect is obtained when the weight ratio of the 3 β ,23,28-trihydroxy-12-oleanene 23-cafeate and the 3 β ,23,28-trihydroxy-12-oleanene 3 β -cafeate is within the above-described range.

In an aspect of the present disclosure, the composition for skin moisturizing may further contain a ceramide.

In the present disclosure, the ceramide may be one or more selected from a group consisting of a natural ceramide and a pseudoceramide. The natural ceramide is a naturally occurring ceramide and includes ceramide 1, ceramide 2, ceramide 3, ceramide 4, ceramide 5, ceramide 6, ceramide 7, ceramide 8, etc. The pseudoceramide includes ceramide 104, ceramide 102, etc.

In the present disclosure, the pseudoceramide collectively refers to a compound having the lamellar structure of the natural ceramide.

In an aspect of the present disclosure, the pentacyclic triterpene caffeic acid ester as the active ingredient and the ceramide may be contained at a weight ratio of 1 : 0.1-1.5. Specifically, the weight ratio of the pentacyclic triterpene caffeic acid ester and the ceramide may be 1 : 0.15-1, 1 : 0.18-0.9, 1 : 0.19-0.8, 1 : 0.2-0.5 or 1 : 0.2. A superior skin moisturizing or skin whitening effect is obtained when the weight ratio of the pentacyclic triterpene caffeic acid ester and the ceramide is within the above-described range.

In an aspect of the present disclosure, the composition may be a composition for external application to skin. The composition for external application to skin may be used as a pharmaceutical composition for treating skin dryness or whitening skin. The composition for external application to skin is a general term including any composition that can be applied from outside of skin and cosmetics and medicines of various formulations can be included therein. The composition for external application to skin may be, for example, a composition for external application to skin for skin moisturizing or skin whitening, although not being particularly limited thereto.

In an aspect of the present disclosure, the composition may be a cosmetic composition.

The formulation of the cosmetic composition is not particularly limited and may be selected adequately depending on purposes. For example, it may be prepared into one or more formulation selected from a group consisting of a softening lotion (skin lotion or milk lotion), a nourishing lotion, an essence, a nourishing cream, a massage cream, a pack, a gel, an eye cream, an eye essence, a cleansing cream, a cleansing foam, a cleansing water, a powder, a body lotion, a body cream, a body oil and a body essence, although not being limited thereto.

The content of the active ingredient is not particularly limited but may be 0.0001-10 wt% based on the total weight of the composition. A superior effect may be achieved without side effects when the content of the active ingredient satisfies the above-described condition. The cosmetic composition may further contain a cosmetically acceptable excipient serving as a diluent, a dispersant or a carrier such that the composition can be uniformly applied on skin. Specifically, the composition may be an oil-in-water (O/W) emulsion and the emulsion may contain at least 80 wt% of water as an excipient. However, without being limited thereto, any known cosmetically acceptable excipient may also be used. In addition, the cosmetic composition may contain various cosmetic adjuvants used in the art such as a fatty substance, an organic solvent, silicon, a thickener, an emollient, a sunscreen agent, an antifoaming agent, a moisturizing agent, a fragrance, a preservative, a surfactant, a filler, a sequestrant, a cationic, anionic, nonionic or amphoteric polymer or a mixture thereof, a propellant, an alkalizing or acidifying agent, a dye, a pigment or a nanopigment (especially, one prepared to supplementally provide sunscreen effect by physically blocking UV radiation) or other ingredients commonly used in

cosmetics, especially in sunscreen compositions. The organic solvent may be a lower alcohol or a polyol, e.g., ethanol, isopropanol, propylene glycol, glycerol, sorbitol, etc. The fatty substance may be an oil, a wax or a mixture thereof, a fatty acid, a fatty acid ester, a fatty alcohol, petrolatum, paraffin, lanolin, hydrogenated lanolin or acetylated lanolin. The oil may be a plant, mineral or synthetic oil and may be selected, especially, from hydrogenated palm oil, hydrogenated castor oil, liquid petrolatum, liquid paraffin, purcellin oil, volatile or nonvolatile silicone oil and isoparaffin.

Hereinafter, the present disclosure will be described in detail through examples. However, the following examples are for illustrative purposes only and the scope of the present disclosure is not limited by the examples.

Examples 1-4 and Comparative Example 1

A hibisci cortex extract obtained from hibisci cortex purchased from Kunwha Pharmaceutical was used for Comparative Example 1.

$3\beta,23,28$ -Trihydroxy-12-oleanene 23-cafeate (PTCE 1) was used for Example 1 and $3\beta,23,28$ -trihydroxy-12-oleanene 3β -cafeate (PTCE 2) was used for Example 2.

Extraction method of Comparative Example 1

A. Dried hibisci cortex was extracted with 70% ethanol at 50 °C for 3 hours.

B. The extract was separated using a 1.2 μ m filter and used for Comparative Example 1 (hibisci cortex extract: HE).

Skin moisturizing and skin whitening tests were conducted using the substances of Examples 1-2 according to Table 1.

【Table 1】

Example 1	3 β ,23,28-Trihydroxy-12-oleanene 23-caffeate, 10 ppm
Example 2	3 β ,23,28-Trihydroxy-12-oleanene 3 β -caffeate, 10 ppm
Example 3	5 ppm Example 1 + 5 ppm Example 2
Example 4	10 ppm Example 1 + 2 ppm ceramide PC 104 (Macrocare)

Test Example 1: Evaluation of skin moisturization (quantification of hyaluronic acid synthase 2 (HAS2) and caspase 14 by real-time PCR)

5 HAS2 (hyaluronan synthase 2) is a gene that produces hyaluronan or hyaluronic acid (HA). Caspase 14 is a protein which is involved in keratinocyte terminal differentiation and is important for the formation of the skin barrier. In skin moisturization, HA fills the skin and caspase 14 prevents water loss by strengthening the skin barrier. It is also involved degradation of filaggrin and production of natural
10 moisturizing factors (NMFs). The expression level of HAS2 and caspase 14 was investigated for Comparative Example 1 and Examples 1-3.

A. Cell culturing

Keratinocyte HaCaT cells were cultured in a DMEM medium containing 10% FBS and streptomycin in a 5% CO₂ incubator at 37 °C. The cells were subcultured
15 after the confluency reached about 90%.

B. Real-time PCR

The HaCat cells cultured in A were seeded onto a 12-well plate with 1x10⁴ cells per well. After incubation for 24 hours, the cells were treated with Examples 1-3 and Comparative Example 1. 24 hours later, the cells were harvested for

extraction of RNA. The RNA prepped using Invitrogen's TRIzol was subjected to RT-PCR using Invitrogen's Superscript III. Real-time qPCR was conducted using the obtained cDNA and the Taqman probe. Relative mRNA level was analyzed by measuring the change of fluorescence form SYBR Green I using the ICycler software. HAS2 and caspase 14 primers available from Life technologies were used (HAS2: Hs00193435_m1, caspase14: Hs00201637_m1). The quantitative expression level of the genes was corrected using GAPDH (glyceraldehyde 3-phosphate dehydrogenase) as an internal standard. The expression level of the HAS and caspase 14 genes is shown in Figs. 1 and 2, respectively.

As seen from Fig. 1 and Fig. 2, the groups treated with Examples 1-3 showed superior skin moisturizing effect because the expression level of the HAS and caspase 14 genes was higher as compared to the untreated group. Especially, Example 3 showed the highest expression level of the HAS and caspase 14 genes. In addition, the groups treated with Examples 1-3 showed remarkably increased expression of the HAS and caspase 14 genes as compared to the hibisci cortex extract (HE) of Comparative Example 1.

Test Example 2: Evaluation of skin moisturization

The skin moisturizing effect of Example 1 and Example 4 was evaluated by immunofluorescent staining and imaging of filaggrin which is known as an important skin moisturizing factor.

The surface of artificial skin (AmoreReskin™) was treated with 2 ppm ceramide PC 104, Example 1 and Example 4 for 4 days and then immunofluorescent staining was conducted. The immunofluorescent staining was conducted as follows.

Method of the immunofluorescent staining

i. Artificial skin is immersed in OCT solution (optimal cutting temperature, Tissue Tek) and stored at -70 °C.

ii. The artificial skin is prepared into 10-µm thick sections using a cryotome and fixed on a slide.

5 iii. Lines are drawn around the artificial skin sections using a PAP pen.

iv. The slide is dried at room temperature for at least 8 hours.

v. The artificial skin sections are washed with PBS and dissolved in OCT solution.

10 vi. The artificial skin sections are treated with a blocking solution (1% BSA in PBS) for 30 minutes.

vii. The sections are treated with anti-filaggrin antibody (ab24584, Abcam) for 2 hours.

viii. The sections are treated with Texas Red anti-rabbit antibody (T6391, Life technologies) diluted to 1:200 in a blocking solution for 1 hour.

15 ix. The sections are stained with DAPI (4',6-diamidino-2-phenylindole) for 5 minutes.

x. The sections are washed with PBS 3 times.

xi. After removing PBS, adding a mounting solution and covering a cover glass, the artificial skin sections are solidified.

20 xii. The sections are observed under a LSM510 microscope.

The result is shown in Fig. 3. In the original images of Fig. 3, the filaggrin protein was shown blue. In the grayscale images of Fig. 3, the blue regions in the original images were converted to white regions. Accordingly, the filaggrin protein is shown white in the grayscale images of Fig. 3.

25 As seen from Fig. 3, the filaggrin protein shown white was significantly

increased for Examples 1 and 4. Accordingly, it was confirmed that skin moisturizing effect was improved because the filaggrin protein was increased for Examples 1 and 4.

Test Example 3: Evaluation of skin whitening (melanin assay using B16 melanoma cells)

B16 melanoma cells were seeded onto a 12-well plate with 1.5×10^5 cells per well and then cultured for 24 hours. After treating with Examples 1-3, Comparative Example 1 or a positive control, the cells were cultured for 6 days while exchanging with a fresh medium once in three days. After the treatment with the test substances, the cells were washed with DPBS and then lysed at 60 °C for 1 hour after adding 2 N NaOH (10% DMSO). The cell culture and the cell lysate were transferred to a 96-well plate and absorbance was measured at 475 nm. Then, melanin content was calculated from a standard curve for synthetic melanin. The calculated melanin content was normalized to the total protein quantity for each test group and then compared with that of the control group.

The result is shown in Fig. 4. As seen from Fig. 4, Examples 1-3 showed superior skin whitening effect as compared to Comparative Example 1 and the positive control group.

Hereinafter, the present disclosure will be described in detail through formulation examples. However, they are for illustrative purposes only and the scope of the present disclosure is not limited thereby.

[Formulation Example 1] Softening lotion (skin lotion)

【Table 2】

Ingredients	Contents (wt%)
Example 1, Example 2 or Example 3	0.001
Glycerin	3.0
Butylene glycol	2.0
Propylene glycol	2.0
Carboxyvinyl polymer	0.1
PEG-12 nonyl phenyl ether	0.2
Polysorbate 80	0.4
Ethanol	10.0
Triethanolamine	0.1
Antiseptic, pigment and fragrance	Adequate
Purified water	Balance

[Formulation Example 2] Nourishing lotion (milk lotion)

【Table 3】

Ingredients	Contents (wt%)
Example 1, Example 2 or Example 3	0.001
Glycerin	3.0
Butylene glycol	3.0
Propylene glycol	3.0
Carboxyvinyl polymer	0.1

Beeswax	4.0
Polysorbate 60	1.5
Caprylic/capric triglyceride	5.0
Squalane	5.0
Sorbitan sesquioleate	1.5
Liquid paraffin	0.5
Cetearyl alcohol	1.0
Triethanolamine	0.2
Antiseptic, pigment and fragrance	Adequate
Purified water	Balance

[Formulation Example 3] Nourishing cream

【Table 4】

Ingredients	Contents (wt%)
Example 1, Example 2 or Example 3	0.001
Glycerin	3.0
Butylene glycol	3.0
Liquid paraffin	7.0
β -Glucan	7.0
Carbomer	0.1
Caprylic/capric triglyceride	3.0
Squalane	5.0

Cetearyl glucoside	1.5
Sorbitan stearate	0.4
Polysorbate 60	1.2
Triethanolamine	0.1
Antiseptic, pigment and fragrance	Adequate
Purified water	Balance

[Formulation Example 4] Massage cream

【Table 5】

Ingredients	Contents (wt%)
Example 1, Example 2 or Example 3	0.001
Glycerin	8.0
Butylene glycol	4.0
Liquid paraffin	45.0
β -Glucan	7.0
Carbomer	0.1
Caprylic/capric triglyceride	3.0
Beeswax	4.0
Cetearyl glucoside	1.5
Sorbitan sesquioleate	0.9
Vaseline	3.0
Paraffin	1.5

Antiseptic, pigment and fragrance	Adequate
Purified water	Balance

[Formulation Example 5] Pack

【Table 6】

Ingredients	Contents (wt%)
Example 1, Example 2 or Example 3	0.001
Glycerin	4.0
Polyvinyl alcohol	15.0
Hyaluronic acid	5.0
β -Glucan	7.0
Allantoin	0.1
Nonyl phenyl ether	0.4
Polysorbate 60	1.2
Ethanol	6.0
Antiseptic, pigment and fragrance	Adequate
Purified water	Balance

5 [Formulation Example 6] Ointment

【Table 7】

Ingredients	Contents (wt%)
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Example 1, Example 2 or Example 3	0.001
Glycerin	8.0
Butylene glycol	4.0
Liquid paraffin	15.0
β -Glucan	7.0
Carbomer	0.1
Caprylic/capric triglyceride	3.0
Squalane	1.0
Cetearyl glucoside	1.5
Sorbitan stearate	0.4
Cetearyl alcohol	1.0
Beeswax	4.0
Antiseptic, pigment and fragrance	Adequate
Purified water	Balance

While the exemplary embodiments have been shown and described, it will be understood by those skilled in the art that various changes in form and details may be made thereto without departing from the spirit and scope of this disclosure

5 as defined by the appended claims.

【CLAIMS】

【Claim 1】

A composition for skin moisturizing, which comprises one or more of 3 β ,23,28-trihydroxy-12-oleanene 23-caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof; and 3 β ,23,28-trihydroxy-12-oleanene 3 β -
5 caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof as an active ingredient.

【Claim 2】

10 A composition for skin whitening, which comprises one or more of 3 β ,23,28-trihydroxy-12-oleanene 23-caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof; and 3 β ,23,28-trihydroxy-12-oleanene 3 β -caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof as an active ingredient.

【Claim 3】

The composition according to claim 1 or 2, wherein the active ingredient is 3 β ,23,28-trihydroxy-12-oleanene 23-caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof.

【Claim 4】

The composition according to claim 1 or 2, wherein the active ingredient is

3 β ,23,28-trihydroxy-12-oleanene 3 β -caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof.

【Claim 5】

5 The composition according to claim 1 or 2, wherein the active ingredient is comprised in an amount of 0.0001-1 wt% based on the total weight of the composition.

【Claim 6】

10 The composition according to claim 1 or 2, wherein the composition comprises 3 β ,23,28-trihydroxy-12-oleanene 23-caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof; and 3 β ,23,28-trihydroxy-12-oleanene 3 β -caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof.

15 **【Claim 7】**

 The composition according to claim 6, wherein the composition comprises 3 β ,23,28-trihydroxy-12-oleanene 23-caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof; and 3 β ,23,28-trihydroxy-12-oleanene 3 β -caffeate, a salt thereof, an isomer thereof, a hydrate thereof or a solvate thereof at a
20 weight ratio of 1 : 0.5-1.5.

【Claim 8】

 The composition according to claim 1, wherein the composition for skin

moisturizing further comprises a ceramide.

【Claim 9】

The composition according to claim 8, wherein the ceramide is one or more
5 of ceramide 1, ceramide 2, ceramide 3, ceramide 4, ceramide 5, ceramide 6,
ceramide 7, ceramide 8, ceramide 102 and ceramide 104.

【Claim 10】

The composition according to claim 1 or 2, wherein the composition is a
10 composition for external application to skin.

【Claim 11】

The composition according to claim 1 or 2, wherein the composition is a
cosmetic composition.

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