SUMMARY

In one aspect, there is provided a keratin protein cosmetic composition comprising at least one keratin protein ~~derived from human hair~~selected from the group consisting of alpha-keratose, gamma-keratose, alpha-kerateine, and gamma-kerateine; and at least 50% water ~~a cosmetic base solution~~ based on the total weight of the cosmetic composition, wherein the keratin protein is not denatured and maintains natural keratin protein conformation, and wherein the keratin protein comprises at least 30% alpha-keratose.

In another aspect, there is provided a method for reducing hair breakage comprising the steps of administering the keratin protein cosmetic composition as described herein to a surface of the hair in need of treatment; and rinsing the hair to remove any excess keratin protein cosmetic composition thereby increasing hair thickness and hair volume to reduce hair breakage.

In yet another aspect, there is provided a method of reducing hair frizziness comprising the steps of administering the keratin protein cosmetic composition as described herein to a surface of the hair in need of treatment; and rinsing the hair to remove any excess keratin protein cosmetic composition thereby causing the hair to exhibit less frizz.

In another aspect, there is provided a method of reducing or mending hair split ends comprising the steps of administering the keratin protein cosmetic composition of claim 1 to a surface of the hair in need of treatment; and rinsing the hair to remove any excess keratin protein cosmetic composition thereby resulting in split end mending or reducing the number of split ends.

In yet another aspect, there is provided a cosmetic method of hardening and strengthening the nails of a mammal comprising the step of applying the cosmetic composition as described herein topically to contact and coat all exposed surfaces of the nails in need of treatment to increase the hardness and strength of the nails.

In another aspect, there is provided a cosmetic method of repairing or strengthening the skin of a mammal comprising the step of applying the cosmetic composition as described herein topically to contact and coat all exposed surfaces of the skin in need of treatment thereby repairing or strengthening the skin of the mammal.

According to one aspect, a keratin protein cosmetic composition is provided. The keratin protein cosmetic composition includes at least one keratin protein that is derived from human hair. The keratin protein cosmetic composition also includes a cosmetic base solution. According to one embodiment, the keratin protein includes

alpha-keratose, gamma-keratose, alpha-kerateine, gamma-kerateine, or a combination thereof. According to one embodiment, the keratin protein includes at least 30% alpha-keratose. According to one embodiment, the cosmetic base solution includes one or more of pink pomelo, hydrolyzed quinoa, artichoke leaf, vitamin A, vitamin C, vitamin B1, zinc, gotu kola, tapioca starch, kaolin clay, pea protein, phospholipids, brown algae, silica silylate, hydrated silica, asiaticoside/madecassoside, panthenol, cypress, baobab seed oil, or any combination thereof. According to one embodiment, the keratin protein cosmetic composition is in the form of an aqueous solution, powder, lotion, hydrogel, oil, emulsion, paste, polish or cream. According to one embodiment, the keratin protein cosmetic composition is formulated as a hair care product, body wash, shampoo, conditioner, moisturizer, deodorant, anti-aging/skin repair preparation, cleanser, toner, eye care composition, lip care composition, fingernail care composition, toenail care composition, scalp care composition, sun care composition, hand care composition, or body care composition. According to one embodiment, the keratin protein is present in an amount of about 0.01% to about 1% based on the total weight of the cosmetic composition. According to one embodiment, the keratin protein cosmetic composition includes at least 50% water based on the total weight of the cosmetic composition. According to one embodiment, the keratin protein is not denatured and maintains natural keratin protein conformation. According to one embodiment, at least about 30% of the keratin protein exhibits a molecular weight of at least about 443 KDa.

According to another aspect, a method for reducing hair breakage is provided. The method includes the steps of administering the keratin protein cosmetic composition as provided herein to a surface of the hair in need of treatment thereby increasing hair thickness and hair volume to reduce hair breakage. The hair may be styled immediately after application. The hair may also be washed between applications. According to one embodiment, the hair breakage is reduced by at least 40% after one administration.

According to another aspect, a method of reducing hair frizziness is provided. The method includes the step of administering the keratin protein cosmetic

CLAIMS

What is claimed is:

1. A keratin protein cosmetic composition comprising:

at least one keratin protein selected from the group consisting of alpha-keratose, gamma-keratose, alpha-kerateine, and gamma-kerateine; and

at least 50% water based on the total weight of the cosmetic composition,

wherein the keratin protein is not denatured and maintains natural keratin protein conformation, and wherein the keratin protein comprises at least 30% alpha-keratose.

~~2. The keratin protein cosmetic composition of claim 1, wherein the keratin protein comprises at least 30% alpha-keratose.~~

~~3~~2. The keratin protein cosmetic composition of claim 1, further comprising one or more of pink pomelo, hydrolyzed quinoa, artichoke leaf, vitamin A, vitamin C, vitamin B1, zinc, gotu kola, tapioca starch, kaolin clay, pea protein, phospholipids, brown algae, silica silylate, hydrated silica, asiaticoside/madecassoside, panthenol, cypress, baobab seed oil, or any combination thereof.

~~4~~3. The keratin protein cosmetic composition of claim 1 in the form of an aqueous solution, powder, lotion, hydrogel, oil, emulsion, paste, polish or cream.

~~5~~4. The keratin protein cosmetic composition of claim 1, wherein the composition is formulated as a hair care product, body wash, shampoo, conditioner, moisturizer, deodorant, anti-aging/skin repair preparation, cleanser, toner, eye care composition, lip care composition, fingernail care composition, toenail care composition, scalp care composition, sun care composition, hand care composition, or body care composition.

~~6~~5. The keratin protein cosmetic composition of claim 1, wherein the keratin protein is present in an amount of 0.01% to 10% based on the total weight of the cosmetic composition.

~~7~~6. The keratin protein cosmetic composition of claim 1, wherein at least 30% of the keratin protein exhibits a molecular weight of at least 443 KDa.

~~8~~7. A method for reducing hair breakage comprising the steps of:

administering the keratin protein cosmetic composition of claim 1 to a surface of the hair in need of treatment; and

rinsing the hair to remove any excess keratin protein cosmetic composition thereby increasing hair thickness and hair volume to reduce hair breakage.

~~9~~8. The method of claim ~~8~~7, wherein the hair breakage is reduced by at least 40% after one administration.

~~10~~9. A method of reducing hair frizziness comprising the steps of:

administering the keratin protein cosmetic composition of claim 1 to a surface of the hair in need of treatment; and

rinsing the hair to remove any excess keratin protein cosmetic composition thereby causing the hair to exhibit less frizz.

~~11~~10. The method of claim ~~10~~9, wherein the hair frizziness is reduced by at least 40%.

~~12~~11. A method of reducing or mending hair split ends comprising the steps of:

administering the keratin protein cosmetic composition of claim 1 to a surface of the hair in need of treatment; and

rinsing the hair to remove any excess keratin protein cosmetic composition thereby resulting in split end mending or reducing the number of split ends.

~~13~~12. The method of claim ~~12~~11, wherein at least 80% of the treated split end hair is completely mended according to the formula:

$$\%\ \text{mended} = \frac{[\#\ \text{of mended fibers} + \#\ \text{of partially mended fibers}]}{\text{Total \# of split end fibers taken initially.}} \times 100$$

~~14~~13. A cosmetic method of hardening and strengthening the nails of a mammal comprising the step of applying the cosmetic composition of claim 1 topically to contact and coat all exposed surfaces of the nails in need of treatment to increase the hardness and strength of the nails.

~~15~~14. The cosmetic method of claim ~~14~~13, further comprising the steps of:

maintaining the keratin protein cosmetic composition in contact with the nail.

~~16~~15. A cosmetic method of repairing or strengthening the skin of a mammal comprising the step of applying the cosmetic composition of claim 1 topically to contact and coat all exposed surfaces of the skin in need of treatment thereby repairing or strengthening the skin of the mammal.

~~17~~16. The cosmetic method of claim ~~16~~15, further comprising the steps of:
maintaining the keratin protein cosmetic composition in contact with the skin.