A COMPOSITION FOR SKIN AND/OR HAIR CARE AND/OR TREATMENT

FIELD OF INVENTION

The present invention relates to a composition for skin and/or hair care and/or treatment. More particularly, the composition comprising seaweed extract and an essential oils with antimicrobial function.

BACKGROUND OF INVENTION

Seaweeds are plant-like organisms that generally live attached to rock or other hard substrata in ocean as well as in rivers, lakes, and other water bodies. Some seaweeds are microscopic, such as the phytoplankton that live suspended in the water column and provide the base for most marine food chains. Some are enormous, like the giant kelp that grow in abundant "forests" and tower like underwater redwoods from their roots at the bottom of the sea. Seaweeds are marine algae: saltwater-dwelling, simple organisms that fall into the somewhat outmoded, but still useful, category of "plants". Most of them are the green (about 1500 species), brown (about 1800 species) or red (about 6500 species) kinds.

Seaweed is chock-full of vitamins, minerals, and fiber, and can be tasty. Many seaweeds contain anti-inflammatory and anti-microbial agents. Their known medicinal effects have been legion for thousands of years. Certain seaweeds do, in fact, possess powerful cancer-fighting agents that researchers hope will eventually prove effective in the treatment of malignant tumors and leukemia in people. These versatile marine plants and algae have also contributed to economic growth. Among their many uses in manufacturing, they are effective binding agents (emulsifiers) in such commercial goods as toothpaste and fruit jelly, and popular softeners (emollients) in organic cosmetics and skin-care products. "Extract of

seaweed" is often found on the list of ingredients on cosmetic packages, particularly in face, hand and body creams or lotions.

Several functions of seaweed extract were also identified, such as a skin product containing bird nest with seaweed extract and preparation method thereof (Patent CN 103720630A), fresh aloe seaweed detergent milk and its preparing process (Patent CN 1281033A) and composition comprising *Undariopsis Peterseniana* extract for preventing hair loss and improving hair growth (WO 2013121623A1). However, the composition is not the same as present invention. Hence, the different composition method attributed to the different method of preparation thereof.

This present disclosure identified the multiple functions or indications of seaweed extract with essential oil with antimicrobial function for skin and/or hair care and/or treatment applications.

SUMMARY OF INVENTION

The invention provides a composition of seaweed extract for various applications such as, face mask, hair gel, hair mask, body shampoo, hair shampoo, feminine hygiene wash, and facing cleanser.

The invention also provide a composition for manufacture of skin and hair related products. Particularly, the invention provides a multiple functions of composition having seaweed extract with other ingredients. The composition is 100% natural and free from chemical due to the use of natural source and without any added preservative.

Preferably, the present invention is a composition for use in dermatological related applications. Preferably, the composition uses seaweed extract as a base ingredient.

The present invention provides a formulation for treating signs of aging by keeping the skin revitalized, moisturized, and youthful.

The invention provides a skin treatment composition having moisturizing effect for moisturizing indication. Seaweed extract helps to maintain the skin's natural moisture balance, infuse skin with moisture.

The present invention uses seaweed extract as a natural ingredient with therapeutic and anti-inflammatory properties. More preferably, the composition can be used to treat skin rashes, wounds, and combating acnes.

The invention provides a natural exfoliant to be used in personal hygiene applications such as face wash and shampoo. Particularly, the composition is used to remove bacteria, dead cells and other waste products from the skin.

The invention is provides a hair treatment composition. The seaweed-based composition is used to strengthen hair and maintaining healthy hair. Seaweed extract nourishes the scalp and hair follicles by mineral therein while iodine of seaweed stimulate hair growth activity as added advantage.

The invention provides a composition for skin and/or hair care and/or treatment comprising seaweed extract, an essential oil with antimicrobial function and further comprising of other ingredients. Preferably, essential oil is tea tree oil, lavender oil, chamomile oil, peppermint oils, or a combination thereof.

Preferably, the seaweed species is *Eucheuma Cottonii*, *Ascophyllum Nodosum, Laminaria Hyperborea, Gracilaria Changii, Sargassum Siliquosum* and *Gelidiella Acerosa.* However, selection of the species is not limited thereof.

The present invention provides a method of producing the product derived from composition comprising the steps of washing fresh seaweed thoroughly using water, drying the seaweed, pulverizing the dried seaweed into powder form and mixing the seaweed powder with essential oil to form a mixture and subjecting the mixture to gamma ray irradiation.

The invention further provides a method for preparation of the composition. Preferably a preservative step is gamma ray irradiation method. This is because gamma ray irradiation is an effective preservation method without application of preservative additives.

One skilled in the art will readily appreciate that the present invention is well adapted to carry out the objects and obtain the ends and advantages mentioned, as well as those inherent therein. The embodiments described herein are not intended as limitations on the scope of the invention.

DETAILED DESCRIPTION OF THE INVENTION

This invention is a composition for skin and/or hair care and/or treatment composition comprising seaweed extract and an essential oils with antimicrobial function.

The seaweed extract is used as base ingredient in the composition. The dermatological potentials of seaweed have been reported, however there is no found information about seaweed being a bio-active ingredient for skin and hair treatment.

The invention discloses a 100% natural base composition for skin and hair treatment without preservative or chemical ingredients. This 100% natural composition will not cause skin toxicity as there are no harmful chemical ingredients incorporated. Additionally, the method of producing of the composition is 100% natural without adding any chemical.

One aspect of the present invention provides a potent bio-active ingredient for anti-aging formulation to address skin aging-related problems such as wrinkles, dry skin texture, age spots, sagging, and thinning by keeping the skin revitalized, moisturized, and youthful. These functions are attributed by the wealth of essential vitamins, minerals, amino acids, enzymes and antioxidants in seaweed. These elements guarding the skin against the harmful effects of environmental pollutants and helps to slow down the skin's aging processes. Seaweed does wonders to aging skin by working to promote tissue regeneration activities in the skin to create skin elasticity. For an external treatment, a seaweed bath can help to maintain hormone balance and increase blood flow at the surface of the skin to make the skin suppler, smooth, radiant and more youthful appearance. The anti-inflammatory properties present in seaweed are also useful in treating skin rashes and wounds. The phytonutrients elevate blood flow and bring a healthy glow to the face.

In the preferable embodiment of the present invention, seaweed extract does not remove natural emollients from the skin during the cleansing process. This contributed to the retaining of the skin moisture for shining and soft texture skin. Continuously applying of natural seaweed skin care can increase levels of skin hydration and to promote a healthy glowing complexion. Seaweed is full of lipids, proteins, minerals and vitamins, which are easily absorbed and penetrated deep into the skin. This helps the skin to maintain its firmness and hydration. Seaweed is packed with high concentrations of minerals such a fluorine, magnesium and calcium which will enable skin to achieve a radiant skin complexion. The minerals contained in seaweed helps to maintain the skin's natural moisture balance. Seaweed also contains essential fatty acids that infuse skin with moisture and prevent skin from losing that moisture anytime.

In another preferable embodiment of the present invention, seaweed is a natural and anti-inflammatory compounds which have a positive effect on acne explosions. Acne is caused by release of sebum, or oils, which prevent the skin from drying. Seaweed's anti-inflammatory effect reduces the swelling of the explosion. Seaweed is high in anti-bacterial properties that work well for the treatment of acne. For example, seaweed works best in

drawing out impurities and toxins as well as regulating oil levels on your face. When applied topically, seaweeds draw out toxins from our body for our skin absorbs its nutrients through the pores. Beauty treatment such as face mask or spa treatments using natural seaweed ingredients is very popular for oily or acne prone skin. Seaweed masks have the ability to work gently to purify and detoxify whilst promoting circulation and healthy skin rejuvenation. Preferably. Seaweed extract is used to treat skin rashes, wounds, and combating acnes.

Preferably, the composition of the invention is used for sensitive and eczema skin types' application. Seaweed is known for its anti-inflammatory actions as well as its therapeutic properties in treatment of sensitive and allergy prone skin. Seaweed is high in vitamins B1, B2, B3, B6 and B12 which is useful in protecting the skins surface and reduction of inflammation. It is used as active ingredient for many skin care products because of its natural tendency to reduce excessive irritation and redness. Seaweed also rich in vitamin A, C, E and selenium.

As described by the preferred embodiment of the invention, seaweed is also used as a natural exfoliant to remove dead skin cells, which can block pores. Seaweed draws out any excess fluid, dead cells, toxin and other waste products from the skin. Hence it can be used as a cleanser for removing of dead skin cells and other impurities on the skin's surface. More particularly, is the detoxifying agents of the alginates in seaweeds that help to eliminate toxins and heavy metals off from the skin surface. Having a bunch of toxins living inside your skin makes you look dull and lifeless. As an added benefit, getting rid of all of those toxins will make the skin smoother, Seaweed wraps detoxify and cleanse the skin by expelling toxins out of the pores.

Seaweed is a rich source of iodine which it absorbs in ample amounts from the sea water. Iodine is a vital nutrient required for proper growth for all age groups. It is essential for the normal regulation and boosting of thyroid function which also involves the brain and pituitary gland. The thyroid gland produces amino acids that absorb iodine and it also

produces a metabolism-regulating chemical in the bloodstream. This metabolism regulator further helps rejuvenate the skin.

As described by one of the preferred embodiment of the invention, seaweeds have higher levels of minerals such as calcium than terrestrial vegetation and contain essential fatty acids, proteins, chlorophylls, omega-3 and omega-6. Seaweed get direct sunlight and making themselves rich with antioxidants such as vitamins A, B1, B2, C, D, E and protective pigments. Seaweed also has a great source of iodine, iron, sodium, phosphorous, potassium, manganese, porphyran, copper, and zinc are also found in seaweeds. Seaweed also contains *Laminaria Angustata* which is believed to thicken hair.

As set forth in the preceding description, one of the indications of the seaweed-based composition is to nourish the scalp and hair follicles. Seaweed alone contains many of the necessary vitamins and minerals needed for hair growth. The mineral-rich vegetable nourishes the hair shafts and ducts of the scalp hence strengthening the hair and making it look healthier. Seaweed has a complete spectrum of chelated minerals which makes it easy to absorb into human hair.

As described by the above-mentioned preferred embodiment of the invention, seaweed contains omega-3 fatty acids which feed hair follicles to stimulate growth; iron and zinc maintain hair production. Zinc deficiency leads to hair shedding. Moreover, vitamins A and C are also needed to produce sebum which acts as a natural hair conditioner; vitamins B and E help maintain healthy hair. Calcium, rich in seaweed, is another vital mineral in hair production. Finally, detoxifying the body can promote healthier hair growth.

Additionally, iodine of seaweed stimulate hair growth, the iodine can actually fight off bacteria and microscopic fungus that's eating away hair follicles and making which thinning the hair on head top. One of the reasons people start to lose their hair is an iodine deficiency.

Another aspect of the present invention provides a composition for detergent and, face mask and hair gel application which comprises seaweed extract, an essential oil with antimicrobial function wherein the percentage range of seaweed extract to essential oil are range from 2% - 80% to 0.1% - 10%.

According to the preferred embodiment of the invention, the essential oil is used for antimicrobial purpose. Essential oils, preferably tea tree, lavender oils, chamomile oil or peppermint oils with the antimicrobial characters is used to kill the existing microbes, bacteria, viruses, and fungi within the composition. Additionally, essential oils also used to stabilize the property of seaweed extract. Hence, optimize the seaweed extract specific function as skin and hair treatment composition.

More preferably, tea tree oils are used as essential oils for the skin and hair treatment composition. There are numerous health benefits and/or indications of tea tree oils such as antibacterial, antimicrobial, antiseptic and antiviral value, reducing the amount of dandruffs, help the follicle stay healthy and strengthen the hold on hair, reduce hair loss, efficient insect deterrent and insect killer, heal wounds quickly and protect them from infections, neutralize or diminish the scar marks and after spots left by eruptions, boils, pox, and acne, boost immunity: it has a stimulating effect on hormone secretions, blood circulation, and immune system and sudorific. The percentage of the tea tree oils can be suitably adjusted for specific indication or application.

According to the other embodiment of the invention, preferable lavender oil is used as essential oils and/or perfuming oils. Lavender oil not only applied for antibacterial, antimicrobial, antiseptic, antiviral functions, it also able to reduce anxiety and emotional stress, heals burns and wounds, improves sleep, restores skin complexion and reduces acne, slows aging with powerful antioxidants, improves eczema and psoriasis, alleviates headaches, helpful in treatment of hair loss, improving blood circulation. The percentage of the lavender oils can be suitably adjusted for specific indication or application.

Preferably, chamomile oil is used as essential oils and/or perfuming oils. Indications of chamomile oil for skin are treating skin rashes and scarring, moisturizing skin and treating blemish. Besides that, chamomile oil could be used for treating acne and eczema. Benefits of chamomile oil for hair are enriching hair color and radiance as well as moisturizing and softening hair. Chamomile oil is also could act as natural anti-dandruff agent for hair care and/or treatment product. As an air refresher, chamomile oil could act as natural antidepressant for treating anemia and other stress-related syndrome. The percentage of the chamomile oils can be suitably adjusted for specific indication or application.

Alternatively, preferable peppermint oil is used as essential oils and/or perfuming oils. Peppermint oil not only applied for Acne treatment with its anti-microbial properties, it also applied for allergy relief, hydrating burnt skin and relieving pain from sunburns, anti-itchiness, as a bug repellant, calming effects on skin inflammation, improving eczema and psoriasis syndrome, thickening and nourishing damaged hair as well as helps for preventing hair loss and thinning. The percentage of the peppermint oils can be suitably adjusted for specific indication or application.

.Preferable, the seaweed has been produced by following steps: washing fresh seaweed thoroughly using water, drying the seaweed, grinding the dried seaweed into small pieces. More particularly, fresh seaweed are dried under 30 °C to 90 °Cfor 10 to 48 hours Subsequently, the dried pieces seaweed are pulverized into powder form following by mixing the seaweed powder with one or a combination of essential oil to form a mixture. More particularly, the seaweed powder extract range is 2% to 80% and the essential oil is 0.1% to 10% to optimize the specific function of both. Thereafter, the mixture is subjected to gamma ray irradiation. More particularly, the gamma ray treatment range is3kgy to 25kgy.

According to the preferred embodiment of the invention, a preservative step is gamma ray irradiation method. Preferably, gamma ray irradiation is an effective preservation method without application of preservative additives. Gamma rays kill microbes which usually used

to sterilize food for keeping fresh. It is also used in industries to kill the harmful bacteria, organism such as yeast and fungus.

CLAIMS

1. A natural and preservative-free composition sterilized by gamma ray irradiation for skin, hair care, treatment, or a combination thereof consisting of:
seaweed extract;
an essential oil with antimicrobial function; and
water as carrier;
wherein the percentage range of seaweed extract, essential oil and water are 2%- 80%, 0.1% -10% and 10% - 97.90% respectively.

2. A natural and preservative-free composition according to claim 1, wherein the essential oil is tea tree oil, lavender oil, chamomile oil, peppermint oils or a combination thereof.

3. A natural and preservative-free composition according to anyone of claim 1 to 2, wherein the seaweed species is *Eucheuma Cottonii*, *Ascophyllum Nodosum*, *Laminaria Hyperborea*, *Gracilaria Changii*, *Sargassum Siliquosum* and *Gelidiella Acerosa*.

4. A method of producing a composition as claimed in any one of the preceding claims comprising the steps of:
washing fresh seaweed thoroughly using water;
drying the seaweed;
grinding the dried seaweed into small pieces;
pulverizing the dried seaweed into powder form;
mixing the seaweed powder with any one or a combination of essential oils to form a mixture;
subjecting the mixture to gamma ray irradiation.