

Facial Skin Health: Antioxidant Facial Scrub From Red Dragon Fruit Extract

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Abstract

This article discusses Facial Skin Health as seen from Antioxidant Facial Scrub from Red Dragon Fruit Extract. One way to treat your face is to use a scrub. Giving a natural facial scrub has many benefits, including refreshing, repairing and firming facial skin. Antioxidants contained in red dragon fruit include betalains which function to inhibit the growth of bad cholesterol and flavonoids which are related to brain health and reduce the risk of heart disease. Scrub functions to remove dead skin cells on the surface of the body's skin which is rough and dull. In addition, it also functions to help speed up the turnover of new, clean and healthy body skin cells. Dragon fruit face scrub can also smooth the skin. Rough skin is usually caused by a build-up of dead skin cells. The content of vitamin C, protein and folic acid is said to be effective in removing these dead skin cells.

Keywords: Skin Health, Dragon Fruit, Face Scrub

Introduction

Air pollution and exposure to UV rays are sources of free radicals that are harmful to the body. Under normal circumstances, free radicals produced in the body can be neutralized by antioxidants that come from the body. The impact that arises from free radicals on facial skin is that it makes collagen production decrease, facial skin loses its elasticity, facial skin texture becomes rough, dull and starts to appear wrinkles chemicals for facial scrub preparations or other beauty products.

Facial scrub is a facial skin care cosmetic product that contains coarse granules or so-called abrasive cosmetics which function to remove dead skin cells from the epidermis and nourish the skin. The antioxidants contained in red dragon fruit can compete with other products (Carlsen et al., 2010). Red dragon fruit as a scrub material can minimize the risk of allergic side effects because the scrub ingredients are made from natural ingredients and are safe to use.

Efforts that are made to prevent factors that affect skin problems in order to keep the skin healthy, must take care of the skin. Safe care is a treatment that uses natural ingredients without adding chemical compounds.

Dragon fruit plant has four species of dragon fruit and the dragon fruit used in this study is dragon fruit with red flesh (*Hylocereus polyrhizus*) which contains a lot of antioxidants (Zainoldin & Baba, 2009). Not only the flesh, but the dragon fruit skin can also be used. Utilization of dragon fruit skin is expected to reduce organic waste in the surrounding environment.

Dragon fruit plants are vines, morphologically, this plant is an incomplete plant because it has no leaves. Red dragon fruit is one of the horticultural plants cultivated in tropical countries.

Dragon fruit morphology

The fruit is elliptical, the location of the fruit is generally near the end of the branch or stem. Stems can grow more than one fruit, sometimes together or coincide. This red dragon fruit has a fruit smaller than the white dragon fruit. This type of dragon fruit can produce an average weight of up to 500 grams. Red dragon fruit has a sweet taste content of up to 15 briks.

The fruit skin comes from red dragon fruit which weighs 30% of the fruit weight which has not been used optimally. The physical form is similar to a pineapple, except that this fruit has tendrils on its skin and has green scales (Nerdy & Ritarwan, 2019).

Chemical Content of Red Dragon Fruit

Flavonoids, are one of the largest natural phenol groups and are found in all green plants and have secondary metabolite compounds found in green plants, except algae. Flavonoid is composed of two aromatic rings consisting of 15 carbon atoms, where two benzene (C₆) rings are attached to a propane (C₃) chain to form a C₆-C₃-C₆ arrangement.

Flavonoids are polar compounds so they are easily dissolved in polar solvents ethanol, methanol, butanol, acetone. The presence of sugars that are bound to flavonoids tends to cause flavonoids to dissolve more easily in water and the mixture of the solvent above with water is a good solvent for glycosides (Leong et al., 2008). In contrast, less polar aglycogens tend to dissolve more readily in solvents such as ether and chloroform. Flavonoids function as antioxidants in dragon fruit.

Phenolic compounds are the largest secondary metabolites produced by plants. These compounds are produced in plants via the systematic pathway and the pyruvate pathway. Phenolic compounds can have antioxidant, anti-tumor, antiviral and antibiotic activity (Babula et al., 2009). Phenolic compounds are defined chemically as the presence of at least one aromatic ring carrying a hydroxyl group. Polyphenols are a group of chemicals found in plants. This substance has a distinctive sign that it has many phenol groups in its molecule. Polyphenol derivatives as antioxidants can stabilize free radicals by complementing the lack of electrons that free radicals have, and inhibiting the chain reaction of free radical formation. The mechanism of polyphenol compounds as antioxidants is by donating hydrogen from their hydroxyl groups. Polyphenols are components that play a role in antioxidant activity in fruits and vegetables (Hattenschwiler & Vitousek, 2000).

Care in maintaining healthy facial skin

Acne does sometimes interfere with appearance, therefore it is necessary to reduce or better avoid foods that can cause acne, such as fried foods, especially if they are fried using unhealthy oils. In addition, consume less nuts. Nuts contain androgens, which can make acne worse on the face.

Besides functioning as thirst quencher, mineral water is also very good for beauty treatments. Get used to drinking water before bed at least half a liter and feel the benefits on facial skin.

This type of facial treatment is a type of treatment that is generally chosen by some women. Facials themselves have various types, because each treatment salon also offers different types of facials. Facial is a procedure to clean facial skin from all types of facial impurities, such as pimples, blackheads, and others (Angermeier, 1999). Generally, this type of treatment uses green tea extracts that contain antiseptics, so they can cure acne problems. Before doing this treatment, it's a good idea to have a discussion with a dermatologist first, so that you know the current condition of your facial skin.

One way to treat your face is to use a mask. Giving natural face masks has many benefits, including refreshing, repairing and tightening facial skin, improving blood circulation, stimulating the activity of skin cells, removing dead skin cells, softening the skin, and providing nutrition to the skin. Thus, it can be said that masks are one of the most effective facial cleansers. And seeing the various benefits of this face mask, it would be very good if the mask was done regularly.

Face Scrub Description

Facial soap is soap that is specially made and used to clean the face. There are 2 types of facial soap, namely facial wash and facial scrub. Facial wash is used to clean the face from dirt and dust. Facial scrubs are used to help exfoliate dead skin cells.

The history of scrubs begins with the Egyptians, who used various animal oils and alabaster to improve skin texture. The growing scrub uses sulfur, mustard and limestone. In Europe, the Gypsies then developed several chemicals for exfoliating the skin (exfoliating) that developed from generation to generation.

Scrub functions to remove dead skin cells on the surface of the body's skin which is rough and dull. In addition, it also functions to help speed up the turnover of new, clean and healthy body skin cells. George Mackee uses phenol as a scrub to treat acne scarring (Nagaraju & Savitha, 2016). applied to the skin for 30-60 seconds and then rinsed with ethanol in four to six treatments at 2 month intervals.

Antioxidants

In a chemical sense, antioxidants are electron-giving compounds, while in a biological sense antioxidants are molecules or compounds that can reduce free radical activity by preventing cell oxidation.

Antioxidants have an important role as a substance that is efficacious for various diseases related to lifestyle such as cancer, diabetes, cardiovascular and other degenerative diseases. This is related to lifestyle and levels of stress that occur continuously, the negative effects of pollution and exposure to harmful chemical compounds. All of these things can lead to the accumulation of dangerous free radicals.

Natural antioxidants are a type of antioxidant that comes from plants and animals. Examples of natural antioxidants are tocopherol, ascorbic acid, phenolic components, hydroxinic derivatives, curamine.

There are many foods that can be a source of natural antioxidants, for example spices, tea, chocolate, leaves, seeds of cereal, and vegetables. Natural sources of antioxidants are generally phenolic compounds that are scattered throughout the plant. Phenolic compounds, among others, can be in the flavonoid group. The ability of flavonoids as antioxidants has been widely researched, where flavonoids have the ability to reduce or reduce free radicals and also as anti-free radicals. Natural chemical compounds that are classified as antioxidants are ellagic acid, proanthocyanidin, polyphenols, carotenoids, astaxantin, tocopherol, and glutathione.

Face Scrub Using Dragon Fruit

Dragon fruit face scrub can also smooth the skin. Rough skin is usually caused by a build-up of dead skin cells. The content of vitamin C, protein and folic acid is said to be effective in removing dead skin cells (Koch et al., 2010). To use it, you only need to mix the dragon fruit mask with lime. Then, apply the mask on your face and rub gently until the dead skin cells are exfoliated.

There are several types of antioxidants in red dragon fruit, especially in the seeds. Antioxidants are compounds that protect cells in the body from free radicals. Free radicals are unstable molecules that trigger various chronic diseases and cause aging. Antioxidants contained in red dragon fruit include betalains which function to inhibit the growth of bad cholesterol and flavonoids which are related to brain health and reduce the risk of heart disease.

Dragon fruit has many types, the best used for making masks are purple dragon fruit and red dragon fruit. The nutritional content of these two types of dragon fruit is indeed the highest compared to other types, such as white dragon fruit, and others. The method is quite easy, which is only by providing half a medium-sized red or purple dragon fruit, then cutting it into smaller pieces then puree. After that, just apply the mask to the entire surface of the face, and wait for 20 minutes until the mask starts to dry. After that, rinse with cold water to close the open pores of the face. Do this treatment at least 2 times a week for maximum results.

Dragon fruit accelerates the healing process of acne. The content of antioxidants, vitamin C, and vitamin E are proven to accelerate the healing of acne without drying out facial skin. Apart from curing acne, this dragon fruit mask can also brighten dry and dull skin. Vitamin B3 contained in dragon fruit is proven to brighten dry and dull skin, as well as restore redness to facial skin (Seckel, 2005). The very high vitamin E content in dragon fruit can be used to soften facial skin without clogging pores.

Then there is the content of hydroxycinnamates, which are a group of compounds that in several animal studies and test tubes have shown resistance to cancer.

In addition, red dragon fruit also contains other antioxidants such as Vitamin C, beta-carotene, and lycopene which can ward off free radicals and also strengthen the immune system.

Conclusion

There are several types of antioxidants in red dragon fruit, especially in the seeds. Antioxidants are compounds that protect cells in the body from free radicals. Free radicals are unstable molecules that trigger various chronic diseases and cause aging. Dragon fruit accelerates the healing process of acne. The content of antioxidants, vitamin C, and vitamin E are proven to accelerate the healing of acne without drying out facial skin. Apart from curing acne, this dragon fruit mask can also brighten dry and dull skin. Scrub from red dragon fruit can function to remove dead skin cells on the surface of the body's skin which is rough and dull. In addition, it also functions to help speed up the turnover of new, clean and healthy body skin cells.

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