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Natural Ingredients with Potential as Skin Moisturizers (Body Lotion): A Narrative Literature Review

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ABSTRACT

Hand and body lotion is a skin moisturizing cosmetic preparation that belongs to the emollient (softener) class and has several properties, namely as a source of moisture for the skin, making hands and body soft but not greasy and easy to apply on the skin. Currently, there are quite a lot of moisturizers on the market, but most of them contain several compounds that have the potential to cause interference with the barrier and skin structure. Therefore, it is necessary to carry out a comprehensive exploration effort in order to develop a moisturizer that is safer against the barrier and skin structure. Some natural ingredients that have the potential to be developed as skin moisturizers are papaya latex, yam, VCO (virgin coconut oil), and cocoa fat.

1. Introduction

A study was conducted on 1,800 women aged between 20 – 39 years in five Asian countries, namely India, Indonesia, Korea, the Philippines, and Thailand. From the survey, it was found that the average Asian woman at the age of 25 years 7 months began to show signs of aging. Caring for the skin is very necessary so that the skin does not become dry, rough, and dull. One way to overcome this problem is to use a moisturizer, namely hand and body lotion.¹ Body Lotion is a skin moisturizing cosmetic preparation that is included in the emollient (softener) class and has several properties, namely as a moisturizer for the skin, making the skin soft but not greasy and easy to apply on the skin. Moisturizer is a type of cosmetic that functions to hydrate the skin by reducing the

evaporation of water from the skin and drawing water from the air into the dehydrated stratum corneum.²

There are quite a lot of moisturizers on the market, but most of these moisturizers contain several compounds that have the potential to cause interference with the barrier and skin structure. Therefore, it is necessary to carry out a comprehensive exploration effort in order to develop a moisturizer that is safer against the barrier and skin structure. Indonesia is a country rich in biological resources. Indonesia is the second-largest country with biodiversity after Brazil. This biological wealth gives Indonesia great potential for the development of new therapeutic modalities by utilizing natural ingredients. Every natural ingredient is rich in primary and secondary metabolites, where primary metabolites are



used by plants for their survival, and secondary metabolites are usually not used directly by plants for their survival and have the potential to be developed into new therapeutic modalities for moisturizing purposes.^{3,4}

Potential of natural ingredients as a moisturizer

Virgin coconut oil (VCO) is the purest form of coconut oil with a distinctive taste and smell of natural coconut. Virgin Coconut Oil (VCO) is extracted from the kernels of fresh and naturally ripe coconuts with or without the application of heat. Nutritionally, VCO has a more beneficial effect than copra oil because it retains most of its functional components. VCO is rich in vitamin E and antioxidants and is easily digested due to the presence of medium-chain fatty acids (MCFA). The rich content of Vitamin E in it prevents premature aging and maintains the vitality of the body. When VCO is used as a base in topical applications such as creams or lotions, it can perform an anti-aging function. VCO or Virgin Coconut Oil is one of the natural skin moisturizers that can prevent tissue damage and provide protection to the skin. VCO does not cause skin irritation and can be applied to even the most sensitive skin. Clinical studies have revealed that VCO is effective and safe to use as a moisturizer and can increase skin hydration and accelerate skin healing. It reduces skin irritation by moisturizing and soothing the skin. In a study conducted by Sheeshan et al., Pure coconut oil, which is the main proportion of the formulation itself, acts as a preservative and anti-aging, which increases the shelf life of the body lotion and prevents it from microbial degradation. The developed body lotion is free from skin irritation, has a long service life, and is quiet, stable, and safe.^{5,6}

Cocoa fat is widely used as a raw material in the processing of food, cosmetic and pharmaceutical products. Cocoa fat obtained from hydraulic compression of cocoa nibs is slightly yellow in color, in the form of a brittle solid with chocolate. Cocoa fat contains functional compounds that are beneficial for skin health, such as stearic acid, palmitic acid, oleic

acid, and vitamin E. Stearic fatty acids in cocoa fat are saturated fatty acids that give cocoa fat a solid structure. Stearic acid functions as a moisturizer that can maintain skin moisture when used as a cream. Polyphenols are one of the antioxidant compounds found in fruits, vegetables, tea, red wine, and chocolate. Unfermented cocoa has a polyphenol content of 12-18%. An important property of polyphenolic compounds is that they are colorless and easily oxidized. These compounds in cocoa fat are easily oxidized due to the help of the phenol oxidase enzyme. A study stated that cocoa fat has quality characteristics, containing water content of 85.56%, pH 5.57, Total Plate Number < 10¹ CfU/ g, Staphylococcus aureus < 10¹ CfU/ g, Pseudomonas aeruginosa < 10¹ CfU/ g, Candida albicans < 10¹ CfU/ g, viscosity 55 dpas, has lotion properties and has the effect of improving moisture, oil content and skin smoothness, also has the potential to protect skin damage that accompanies the aging process due to exposure to UVB rays and can maintain elasticity from skin.^{7,8}

Papaya latex contains 50% water-insoluble material, which does not exhibit enzymatic properties. Papain is the main proteolytic constituent of the latex of the papaya plant, leaves, and fruit. The highest papain content is from young fruit. In the market, papain is sold in the form of raw papain or crystal papain. Raw papain is dried papaya latex powder, and papain crystals are the purified form of raw papain. Papain is used for medicine, food (tenderizing meat), and cosmetics. The enzymatic effect of papain is maximal at pH 4.5 to 6.0, and the highest activity is at pH 6.0(8). Heat, light, and air are the causes of the decline in the quality of papaya latex and the decrease in enzymatic activity. Papain speeds up the turnover by removing dead epidermis (stratum corneum), and helps other brightening actives safely penetrate beneath the surface (endodermis) of the skin.⁹⁻¹³



2. Conclusion

Some natural ingredients have the potential to be developed as skin moisturizers, namely papaya latex, yam, VCO (virgin coconut oil), and cocoa fat.

3. References

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