


Identification Of Medicinal Products Made From Macro And Micro Algae In Traditional And Modern Markets In Medan City

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Article Info	ABSTRACT
Keywords: Algae, Traditional Market, Modern Market, Product Identification, Medan City	This study aims to identify and analyze medicinal products containing macro and micro algae as basic ingredients that are available in traditional and modern markets in the city of Medan. The descriptive survey method was used in this research, with data collection through direct observation, interviews with sellers and buyers, and product documentation. The markets surveyed included several representative traditional and modern markets in Medan City. The research results show that modern markets offer a wide range of algae-based products, whereas in traditional markets, these products may be more limited. Consumers in the modern market tend to be more aware of the health benefits of algae and prefer products that have clear certification and quality standards. However, consumer awareness in traditional markets still needs to be increased. Obstacles such as lack of consumer education and limited product distribution are still challenges that need to be overcome. Thus, an effective strategy in developing the market for algae-based medicinal products in Medan City is to increase consumer education, improve regulatory standards and product quality, and expand product distribution more evenly between traditional and modern markets.
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INTRODUCTION

The pharmaceutical market is experiencing rapid development, especially with increasing interest in natural and environmentally friendly products. Among the various potential natural sources, macro and micro algae are the main highlight. Algae, both on a large scale such as seaweed (macroalgae) and on a microscopic scale (microalgae), are known to contain nutrients and bioactive compounds that are beneficial for health. The potential of algae as a basic ingredient for medicines has attracted the attention of researchers and the pharmaceutical industry. Algae, both macroalgae (seaweed) and microalgae, have long been known to have various benefits for human health. Its abundant content of vitamins, minerals and bioactive compounds makes it a potential ingredient in the development of medicines and other health products. In Indonesia, the use of algae in traditional medicine has been carried out for generations. However, information regarding types of algae and their health benefits is still not widely known to the wider public.

In this era, traditional medicinal products are circulating among the public. These medicinal products are packaged neatly, modernly and are easily available to the public. Traditional medicinal products are circulating in the community and seeing that people are interested in using traditional medicines, there are more and more developments in existing traditional medicines. Many traditional medicine producers have emerged because they see that the market share of traditional medicine is quite good. Seeing the competition for market share of traditional medicines, many traditional medicine producers do not apply CPOTB (Good Ways to Make Traditional Medicines (Pertiwi & Suariyani, 2020). Traditionally, macro algae have long been used as food and medicine ingredients, because rich in minerals, macro elements and other micro elements. Several types of algae contain important minerals that are useful for body metabolism such as Iodine, calcium and selenium (Leibo et al., 2017).

Algae are photosynthetic organisms found in various water ecosystems such as seas, lakes, rivers and ponds. Algae has the potential to be a very useful resource for humans, including as a medicinal ingredient. Several types of algae are known to have antioxidant, anticancer, anti-inflammatory and antifungal properties that can help in the treatment of disease. Many studies have been carried out regarding the potential of algae as medicinal ingredients, both micro and macro, and the results show that algae has great potential in treating disease. One of the cities in Indonesia that has great potential for developing algae-based medicinal products is the city of Medan. Medan city has many traditional and modern markets that sell various types of algae-based medicinal products. However, even though the potential of algae as a medicinal ingredient is known, the development of algae-based medicinal products in Medan City is still not very developed.

The city of Medan, as one of the economic and trade centers in Indonesia, has unique market dynamics. Traditional and modern markets in this city offer various medicinal products which may be made from algae. Identification and analysis of these products is important to understand how algae are used in the pharmaceutical industry and how society accepts them.

This research aims to identify medicinal products made from macro and micro algae that are sold in traditional and modern markets in Medan City. Thus, it is hoped that this research can provide an overview of product diversity, consumer perceptions, and the potential for market development for algae-based medicines in the future. This research will also highlight the challenges and opportunities in marketing these products in both types of markets. By understanding the distribution and acceptance of algae-based products in traditional and modern markets, it is hoped that more effective strategies can be found to promote the use of algae as a sustainable source of medicinal ingredients. In addition, the results of this research can provide insight for pharmaceutical industry players and the government in designing policies that support the development of algae-based natural medicinal products.

METHOD

This research uses a survey method. This method was chosen because it aims to obtain information and a deeper understanding of the types and characteristics of algae-based medicinal products available in traditional and modern markets in the city of Medan. The data

analysis used is Descriptive Analysis, which is used to describe the distribution of algae products in the market. traditional and modern, the most commonly used types of algae, dosage forms, and product prices. Address of market selling medicinal products containing algae in Medan city:

- a. Traditional markets: MMTC, Kenangan Baru, Kec. Percut Sei Tuan, Deli Serdang Regency. (available products: ever E 250, Nature-e Advance Hand & Body Lotion)
- b. Traditional Market: Sukaramai, Jl. Arief Rahman Hakim, Sukaramai II, District. Medan Area, Medan City. (available products: ever E 250, Nature-e Advance Capsules)
- c. Modern Market: Moving Forward Together, New Memories, District. Percut Sei Tuan, Deli Serdang Regency. (available products: ever E 250, Wardah nature daily SEAWED Balancing Facial Wash, Nature-e Advance Hand & Body Lotion, Nature-e Advance Capsules)
- d. Modern Market: Maju Bersama, Jl. Lt. Sujono, Bandar Selamat, Kec. Medan Tembung, Medan City. (available products: ever E 250, Wardah nature daily SEAWED Balancing Facial Wash, Nature-e Advance Hand & Body Lotion)

RESULTS AND DISCUSSION

After observing several markets in the city of Medan, algae content was found in Warda, Natur-E Body Lotion, Evere250, Natur-E Advanced.

Wardah Skincare

Wardah skincare products containing algae utilize various types of algae, such as blue, red, green and brown algae, each of which has unique benefits for skin health and beauty. This algae extract not only helps moisturize and protect the skin from environmental damage, but also increases elasticity, reduces signs of aging, and maintains the skin's oil balance. The use of algae in Wardah products shows the brand's commitment to combining natural ingredients with advanced technology to produce effective and safe skin care products.

Wardah, as one of the leading cosmetic brands in Indonesia, has utilized various natural ingredients in its skin care products, including algae. The following are several Wardah products that contain algae extract and their benefits:

1. Wardah Lightening Day Cream and Night Cream
Algae Content: This product contains Blue Algae Extract. Benefits: Blue algae extract is known to be rich in antioxidants which help protect the skin from damage caused by free radicals and environmental pollution. Apart from that, blue algae also helps maintain skin moisture and increases its elasticity.
2. Wardah Hydrating Aloe Vera Gel
Algae Content: Although this product is better known for its aloe vera content, some variants also contain Red Algae Extract. Benefits: Red algae extract helps intensively hydrate the skin and has anti-inflammatory properties that help soothe irritated or reddish skin.
3. Wardah C-Defense Serum

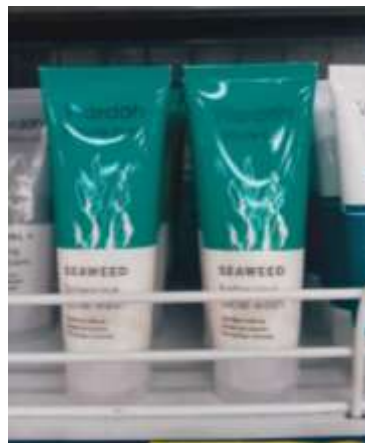
Algae Content: This product contains Green Algae Extract. Benefits: Green algae is rich in vitamins and minerals that help improve skin texture and increase collagen production. It also helps protect skin from UV damage and repairs damaged skin.

4. Wardah Seaweed Cleansing Micellar Water

Algae Content: This product contains Seaweed Extract. Benefits: Seaweed extract helps cleanse the skin of dirt and excess oil without making it dry. Seaweed also helps balance oil production in the skin, making it suitable for oily and acne-prone skin.

5. Wardah Renew You Anti Aging Night Cream

Algae Content: This product contains Brown Algae Extract. Benefits: Brown algae is rich in fucoidan and alginic acid, which help slow skin aging by reducing fine lines and wrinkles. It also helps improve skin structure and increases the skin's natural moisture



Natur-E Body Lotion

Natur-E skincare products containing algae utilize various types of algae, such as red, green and brown algae, to provide different benefits for skin health. This algae extract not only helps moisturize and protect the skin from environmental damage but also improves skin texture, prevents premature aging, and brightens the skin. The use of algae in Natur-E products shows the brand's commitment to combining natural ingredients with effective skincare benefits for healthier and more radiant skin care. Natur-E, a brand known for its natural skin care products, also uses algae in some of their skincare products. The following are details of Natur-E products that contain algae and their benefits:

EverE250 is a health supplement that contains Spirulina and Chlorella extract as one of its main ingredients. The following is an explanation of the algae content in EverE250 Algae Content on EverE250:

1. Spirulina Extract

Benefits: Spirulina is a microalgae that is rich in various important nutrients, including protein, vitamins, minerals and antioxidants. Some of the health benefits of spirulina include: **Protein Source:** Spirulina contains high and complete protein, which plays an important role in the formation of muscle tissue and cell regeneration. **Omega-3 Fatty Acids:** Spirulina contains omega-3 fatty acids, such as EPA and DHA, which are good for heart health and brain function. **Antioxidants:** Antioxidant properties, such as

carotenoids and phycocyanin, help fight free radicals and protect cells from oxidative damage. Immune System Booster: Spirulina can improve the body's immune response and help fight infections. Detoxification: Spirulina has detoxification properties and helps rid the body of heavy metals and toxic substances.

2. Chlorella Extract

Benefits: Chlorella is another type of microalgae that is rich in nutrients and has similar health benefits to spirulina. Detoxification: Chlorella has the ability to bind heavy metals and other toxic substances in the body and help remove them. Increased Energy: The high nutritional content in chlorella can increase energy and reduce fatigue. Recovery After Workout: Chlorella can help speed muscle recovery and reduce symptoms of fatigue after exercise. Maintenance of Digestive Health: The natural fiber in chlorella helps maintain digestive health and reduces symptoms of constipation.

Natur-e Advanced

Natur-E Advanced uses red algae extract as one of its main ingredients in its skin care products. This red algae extract provides important benefits for skin health and beauty, such as antioxidant protection, hydration, skin rejuvenation, and protection against UV damage. By relying on natural ingredients such as red algae extract, Natur-E Advanced provides effective and quality skin care solutions to keep skin healthy and radiant.



1. Natur-E Advanced Anti-Aging Series

Products in this series, such as Natur-E Advanced Anti-Aging Day Cream and Night Cream, contain algae as one of the main ingredients. Algae Content: Red Algae Extract, Benefits: Red algae extract is rich in antioxidants which help fight free radicals and prevent premature aging. Red algae also has anti-inflammatory properties and can help improve skin elasticity, as well as reduce fine lines and wrinkles.

2. Natur-E Daily Nourishing Series

Products such as Natur-E Daily Face Cream and Body Lotion from this series utilize the rich nutrition of algae. Algae Content: Green Algae Extract, Benefits: Green algae is known to be rich in vitamins, minerals and amino acids which are useful for maintaining skin moisture, improving skin texture and providing deep nutrition. Green algae extract also helps protect the skin from pollution and environmental stress.

3. Natur-E White Series

Products in this series, such as Natur-E White Day Cream and Night Cream, are designed to help brighten the skin and contain algae as a key component. Algae Content: Brown Algae Extract. Benefits: Brown algae has depigmenting properties that can help brighten the skin and reduce the appearance of dark spots and hyperpigmentation. Brown algae also helps maintain skin moisture and provides protection from UV damage.

EverE250

EverE250 is a health supplement that contains Spirulina and Chlorella extracts, two types of algae that are rich in nutrients and have various health benefits. By consuming EverE250 regularly, you can benefit from the algae's natural nutritional content to improve overall health, increase energy, support the immune system, and assist in the body's detoxification process (Ulfa et al., 2023)



Natur-e Advanced

Natur-E Advanced uses red algae extract as one of its main ingredients in its skin care products. This red algae extract provides important benefits for skin health and beauty, such as antioxidant protection, hydration, skin rejuvenation, and protection against UV damage. By relying on natural ingredients such as red algae extract, Natur-E Advanced provides effective and quality skin care solutions to keep skin healthy and radiant.



Natur-E Advanced is a series of skin care products that contain algae extract as one of the main ingredients. The following is an explanation of the algae content in Natur-E Advanced. Algae Content in Natur-E Advanced:

1. Red Algae Extract:

Benefits: Red algae contains various active compounds that are beneficial for skin health, such as carotenoids, vitamins, minerals and essential fatty acids. Some of the benefits of red algae extract in skincare products include: Antioxidants: Red algae contains antioxidants that help fight free radicals and protect the skin from damage caused by exposure to UV rays and environmental pollution. Hydration: Red algae extract has the ability to maintain skin moisture and increase the water content of the skin layers, making it a good choice for moisturizing skin care products. Skin Rejuvenation: Active compounds in red algae can help repair damaged skin cells, reduce signs of aging such as fine lines and wrinkles, and increase skin elasticity. Skin Protection: Red algae may also help protect the skin from UV damage, helping to prevent the appearance of dark spots and hyperpigmentation.

CONCLUSION

Thus, an effective strategy in developing the market for algae-based medicinal products in Medan City is to increase consumer education about the health benefits of algae, improve regulatory standards and product quality, and expand product distribution more evenly between traditional and modern markets. With these steps, it is hoped that the market potential for algae products can be optimized to improve the health and welfare of the people of Medan City as a whole.

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