

Natural Hair Growth Tonic: Avemor (*Aloe vera* and *Moringa oleifera*) for Thickening Hair and Anti-Lickness

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Abstract: Hair tonic is a cosmetic preparation used to treat hair growth. Natural Hair Growth Tonic: Avemor is a hair tonic that uses the active ingredients of aloe vera gel and Moringa leaf extract. Aloe vera gel contains several minerals such as Zn, K, Fe, and vitamins such as vitamins A, B1, B2, B12, C, E, inositol, folic acid, and choline as well as lignin substances that function as prevention and treatment of hair loss. Moringa leaf extract contains many nutrients such as minerals, essential amino acids, antioxidants such as vitamin C, vitamin E, flavonoids, and tannins which are useful for treating and nourishing the scalp and hair as well as affecting hair growth activity. Natural Hair Growth Tonic: Avemor has gone through a physical evaluation process in the form of an organoleptic test with a clear yellow color, clear, characteristic aromatic odor, liquid form, homogeneous, pH value of 6, and viscosity of 2.89 cPs. Natural Hair Growth Tonic: Avemor products are marketed online and offline with the target market being women in their late teens to early adulthood, and 40 bottles have been sold at a selling price of IDR 22,500/bottle, but to attract consumers, a discount of 11.11% is given to IDR 20,000 and a free tester is given for the purchase of 3 bottles, The consumer response is quite good and has provided several inputs including improving the packaging in the form of a spray, adding secondary packaging in the form of a box, and there are no reports of negative impacts during use.

Keywords: Hair tonic, Moringa oleifera, Aloe vera

I. INTRODUCTION

The pandemic condition has increased the interest in going back to nature. Hair is a structure derived from the skin which shows the characteristics of human character ^[1]. One of the hair care products is a hair tonic. Hair tonic is a cosmetic preparation used to treat hair growth ^[2]. An online market survey using Google Trends conducted from July 19, 2020, to July 17, 2021, shows that the level of public interest in hair tonic products is quite. Quoting from an article published by BPOM (16/06/2021), there was a shift in the type of public spending from decorative cosmetics to cosmetics used for treatment ^[3]. One of the problems that arise related to the current pandemic condition is hair loss. In an article published by Levi Larassaty (journal.sociolla.com) it was stated that reported Nypost.com, professor of dermatology at Cleveland Clinic, Dr. Shilpi Khetarpal, said that most patients who recovered from Covid-19 experienced hair loss, not due to the virus itself but from physiological stress or stress. Further research Dr. Shilpi said the same thing happened to people who didn't catch the ^[4]. Natural Hair Growth Tonic: Avemor uses the main ingredients in the form of aloe vera gel and Moringa leaf extract. Aloe vera contains substances that are useful for reducing hair loss such as Vitamin A, C, lignin, amino acids, Cu, Inositol, enzymes, minerals, and others. Lignin substances contained in aloe vera (*Aloe vera* L.) function as prevention of hair loss, skincare, and burns ^[5]. The use of aloe vera extract as a hair tonic preparation with a concentration of 7.5% showed good results ^[6].

Another active ingredient is Moringa leaves. The phytochemical content in Moringa leaves is alkaloids, flavonoids, phenolics, triterpenoids/steroids, and tannins ^[7]. According to Dolcas (Biotech, 2008), Moringa leaf extract has been known as a natural ingredient that is very useful for treating and nourishing the scalp and hair, because it contains many nutrients. Moringa leaf extract (*Moringa oleifera*) contains minerals, essential amino acids, antioxidants such as vitamin C, vitamin E, flavonoids, tannins, and many others. In previous studies, Moringa leaf extract with concentrations of 2%, 4%, and 6% have been proven to be formulated as a hair tonic preparation and can provide an effect on hair growth activity ^[8].

II. MATERIALS AND METHODS

2.1 Collection and Authentication of Plant Material

Aloe vera gel is made from the aloe vera plant that grows in Jatimas Housing RW42, Balecatur Gamping, Sleman. The dried extract of Moringa leaves was obtained from PT Java Plant which is located on Jl. Raya Solo Tawangmangu, Km. 32, No. 33, Karang Pandan, Lempo, Salam, Karanganyar District, Karanganyar Regency, Central Java.

2.2 Chemical material

The ingredients used include aloe vera gel, dry extract of Moringa leaves, 96% alcohol, sodium metabisulfite, nipagin, nipasol, menthol, propylene glycol, aquadest, and lavender essential oil.

2.3 Making Aloe Vera Gel

Aloe vera peel and wash clean. Clean aloe vera is cut into small pieces and blended, then filtered using a flannel. The filter results are heated on the stove until boiling, turn off the stove and let cool. Then the aloe vera gel is filtered through filter paper.

2.4 Formulation Hair Tonic Avemor

Formulation of 100 ml Natural Hair Growth Tonic : Avemor contains 2% Moringa leaf extract, 7.5% aloe vera gel, 0.1% Na metabisulfite, 15% alcohol 96%, 30% propylene glycol, 0.02% nipasol, 0.2% methylparaben, 0.3% menthol, 44.88% aquadest, lavender essential oil to taste.

2.5 Procedure for Making Hair Tonic

Hair tonic is made by dissolving Moringa leaf extract and sodium metabisulfite each in half water. Menthol, nipagin, and nipasol were put in 96% alcohol. Aloe vera gel dissolved in propylene glycol. Aloe vera gel dissolved in propylene glycol. All solutions were homogenized and then filtered. The filter results are given lavender essential oil as a fragrance.

2.6 Physical Test

2.6.1 Organoleptic Test

The organoleptic test is an observation using the five senses which includes the color, shape, and smell of the preparation ^[9].

2.6.2 Homogeneity Test

The homogeneity test was carried out by applying the preparation evenly and thinly on a glass plate and seeing if there were any undispersed materials ^[9].

2.6.3 pH test

The pH test is carried out by dipping the pH stick into the hair tonic preparation, waiting for a while until it changes color, and then matched with the appropriate indicator thus showing the pH of the sample ^[9].

2.6.4 Viscosity Test

Viscosity test was carried using an Ostwald viscometer to know the level of thickness of the hair tonic ^[9].

2.7 STP analysis and 4P

2.7.1 Segmentasion

According to Kotler and Armstrong (2001) market segmentation can be interpreted as an attempt to divide the market into groups that be can distinguish from each other in terms of needs, characteristics, or behaviors that may require products and marketing strategies to reach them ^[10]. Determination of the market for Natural Hair Growth Tonic: Avemor, is carried out by making a broad list of potential markets by considering age, gender, economic conditions, and loyalty of potential consumers the understated to produce a more specific target market.

2.7.2 Targeting

The definition of targeting based on Keegan and Green (2008) is the process of evaluating segmentation and focusing marketing strategies on a country, province, or group of people who have the potential to respond ^[10]. From the results of market analysis that have narrowed down to a more specific target, has been concluded that the target market for Avemor's products is women in their late teens (17-25 years) to early adulthood (26-35 years).

2.7.3 Positioning

According to Kotler and Armstrong (2008), positioning is a way of placing a product in a clear, distinct, and desired place by the intended market share^[11]. The ultimate goal of this positioning is the formation of a proportion of the value of a product to consumers that creates a compelling reason why they should buy the product. There are several ways of product positioning that marketers can do in marketing products to targeted consumers, including positioning according to attributes, benefits, applications, and uses, users, competitors, product categories, prices^[12]. Positioning is done by analyzing the components in the Natural Hair Growth Tonic: Avemor product so that what is displayed in the product represents the product and becomes the character of the product which is then expected to attract consumers.

2.7.4 4P

a. Product

Everything on offer to meet market needs includes quality, features, branding, packaging, service, warranties, and others. Product the most important thing in a marketing strategy that must be considered by a company to attract consumers by providing products that meet their needs, have the best quality, performance, or are innovative. Natural Hair Growth Tonic: Avemor contains active ingredients derived from plants in the form of aloe vera and Moringa leaf extract which are still rare in the market. In addition, to provide certain characteristics that highlight the active ingredients, a logo is created that displays an image of the active ingredient. The packaging is made with a press-top cap and a spray for easy application of product to the scalp. The benefits and instructions for using our products are displayed in product packaging which is part of our service to consumers.

b. Price

The value of an item is measured in money, including price lists, promotions, payment terms, credit term. Price plays an important role in the agreement process in buying and selling. In determining the price choice, of course, there is one thing that needs to be considered. Determining the price of Natural Hair Growth Tonic: Avemor considers the costs required for raw materials, investment costs, and production costs as well as the prices of competitors' products in the market.

c. Place

About the distribution process, which is an interrelated company activity to make a product/service ready to be used or consumed, in this case, it includes location, transportation inventory, and market coverage. A strategic and easy-to-reach place, of course, is also a supporting factor in making decisions to buy an item or service. Consumers can reach our products online and offline. Ordering online is by ordering through the official Instagram account and e-commerce, while offline orders can be made via direct messages to us who sell them directly and COD with special conditions.

d. Promotion

Promotion is part of communication that aims to explain to convince potential consumers/consumers about the goods/services offered. This marketing process can be done using advertising, public relations, and salespeople. Promotional activities are another supporting factor for the success of marketing a product/service^[13]. Promotion is done by utilizing content uploaded to social media as well as direct promotion through family networks and people around us. We apply a discount to this product in the form of giving a discount at the beginning of the product launch and giving a free tester with a minimum purchase requirement.

III. RESULTS AND DISCUSSION

3.1 Physical Evaluation

To produce hair tonic preparations that have and give a pleasant sensation after use and also the aroma that people are interested in, trial and error must be carried out. Furthermore, a physical examination or evaluation is carried out to ensure whether the hair tonic preparations made are by the established requirements and to ensure the safety of consumers when using the product. Furthermore, a physical examination or evaluation is carried out to ensure whether the hair tonic preparations made are by the established requirements and to ensure the safety of consumers when using the product. The physical evaluation also aims to ensure there are no unwanted effects on consumers after use so that it is safe to use and market.

3.1.1 Organoleptic Test

Table 1: Organoleptic Test Results

Observation	Results
Color	Golden yellow, clear
Aroma	Aromatic
Dosage form	Liquid

Based on the table of organoleptic test results, it can be seen that the hair tonic preparation has a good appearance because it is not cloudy, in addition to covering the distinctive smell of the main ingredient, the lavender essential oil is added which aims to provide a natural and soft aroma.

3.1.2 Homogeneity Test

A number of Natural Hair Growth Tonic preparations: Avemor which is applied to a glass object shows the absence of coarse particles or deposits which indicate that the preparation is homogeneous.

3.1.3 pH and Viscosity Test

Table 2: pH and Viscosity Test Results

	Standard	Result
pH	3 – 7	6
Viscosity	<5 cPs	2.89

The pH test was carried out because it has a relationship with side effects that may be caused after use. A pH that is too alkaline can cause the skin to become scaly, while if the pH is too acidic it can cause skin irritation [6]. Based on the table, it can be concluded that the pH value of the hair tonic preparation is 6, which means it is still in the range of standard pH values. Viscosity test is used to determine the viscosity of a preparation, where the preparation is declared to have good viscosity if it meets the specified specifications. The results of the viscosity measurement showed a result of 2.89 which means the hair tonic preparation has met the predetermined standard, namely <5 cPs. In hair tonic preparations, a good specification is <5 cPs [14].

3.2 Analysis STP (Segmentation, Targeting, Potitioning) and 4P (Product, Price, Place, Promotion)

To ensure products can be marketed properly and provide services to consumers regarding product information, usage, and ensure safety from the production process to the product to the consumer, we conduct STP and 4P analysis.

3.2.1 Segmentation

Market segmentation for Natural Hair Growth Tonic: Avemor broadly targets male and female consumers with hair problems such as hair loss which causes reduced hair volume and limp. The market segmentation group is divided into several groups according to age groups that have been determined by the Ministry of Health of the Republic of Indonesia, namely late adolescents 17-25 years, early adults 26-35 years, and late adults 36-45 years.

3.2.2 Targeting

From the market segmentation that has been determined, then the target market is narrowed again, resulting in a more specific target market. In addition to being more specific, targeting is also useful for determining the potential segmentation that is interested in buying the product. From the results of product sales, it is concluded that the potential targets of Natural Hair Growth Tonic: Avemor are late teens and early adults with female gender. Sales data will also be used to build a database which can then be used for business development so that we can focus more on producing products that are needed by consumers.

3.2.3 Potitioning

a. Positioning by attribute

Product attributes of Natural Hair Growth Tonic: Avemor includes a packaging label that displays the main ingredients in the form of Moringa leaves and aloe vera as an icon and product characteristic. In addition to the label attached to the primary packaging in the form of a plastic bottle, there is also a secondary packaging material in the form of a cardboard box which also displays the characteristics of the Natural Hair Growth Tonic product: Avemor.

b. Positioning according to benefits

The product is positioned as a hair tonic with the main ingredients of a combination of aloe vera and Moringa leaf extract which provides benefits for thickening hair and anti-limp.

c. Positioning by application and use

This product is positioned as a hair care cosmetic that is used by applying it to the scalp and then gently massaging it to accelerate absorption into the hair roots and for external use only.

d. Positioning according to user

For users, in this case, consumers, Natural Hair Growth Tonic: Avemor is positioned as a cosmetic in the form of a hair tonic to overcome hair problems that overcome hair loss so that it adds volume to the hair and is anti-limp.

e. Positioning according to competitors

For competitors, Natural Hair Growth Tonic: Avemor is a new product still produced on a laboratory scale and does not yet have complex business management.

f. Positioning by product category

Natural Hair Growth Tonic: Avemor is a product that belongs to the cosmetic category, which is more specifically for hair care.

g. Positioning by price

The price of Natural Hair Growth Tonic: Avemor itself is determined using a competitive price method so that it does not fall in the event of a price war. In addition, at the beginning of production, an 11.11% discount is given as well as a free tester for a minimum purchase of three bottles.

3.2.44P (Product, Price, Place, Promotion)

a. Product

To attract consumers' attention and increase sales, we carry out branding in the form of content creation which is uploaded on the official Natural Hair Growth Tonic social media: Avemor in the form of Instagram. Apart from being a means of product branding, the official Instagram is also useful as an information center and customer service. In addition to using content as a means of branding, the packaging is also designed in such a way as to attract consumers' interest and still highlight the product's characteristics in the form of images of Moringa leaves and aloe vera. In addition to using content as a means of branding, the packaging is also designed in such a way as to attract consumers' interest and still highlight the product's characteristics in the form of images of Moringa leaves and aloe vera.

b. Price

Natural Hair Growth Tonic: Avemor is a new product, so it needs to be considered in determining the price. The selling price of Natural Hair Growth Tonic: Avemor is IDR 22,500/bottle. To attract consumers' interest, a program was made in the form of an 11.11% discount and a free tester for consumers who bought 3 bottles. Currently, online shopping has become one of the most popular shopping methods, especially during the pandemic. To simplify the transaction process, payments can be made via transfer. In addition, the on-site payment system is also implemented according to regulations, namely only for certain people and certain regions.

c. Place

Marketing of Natural Hair Growth Tonic: Avemor is very important to ensure that the product is easily available to consumers. With current technological developments and the situation during the pandemic, online shopping is a very potential alternative. Therefore, the Natural Hair Growth Tonic: Avemor product is marketed through social media such as Instagram, Facebook, WhatsApp, and the digital marketplace, Shopee. Considering vaccination activities and easing PPKM, online marketing must also be considered. For offline marketing, each member will be an agent and stock a certain number of products. To expand the scope of distribution and marketing, we also implemented a reseller system.

d. Promotion

Our promotion is in the form of giving an 11.11% discount at the beginning of the product launch, in addition, consumers who buy three bottles will get a free tester for the product Natural Hair Growth Tonic: Avemor.

3.3 Consumer Responsees

Natural Hair Growth Tonic: Avemor itself has been widely marketed and received a lot of input from consumers. These inputs included packaging improvements, the aroma of essential oils which still did not cover the distinctive aroma of the main ingredients, and a request to provide spray packaging to increase practicality in use. We will use these suggestions and inputs as material for product improvement in the next production. Until now, there have been no reports of complaints of unpleasant side effects felt by consumers during use which indicates that the product is still in good condition, which means the product is still in a stable condition.

3.4 Product Advantage

The turnover obtained from product sales to date is IDR 800,000 of which 40 bottles have been sold. The current selling price is still applying an 11.11% discount so that consumers can get products only by paying IDR 20,000 The focus is still on increasing the number of consumers in quantity.

IV. CONCLUSION

Natural Hair Growth Tonic: Avemor is a hair tonic with the main ingredients of 7.5% aloe vera and 2% Moringa leaf extract. The results of the physical test of hair tonic preparations were organoleptic tests in the form of golden yellow color, clear, distinctive aromatic aroma, liquid dosage form, having a pH value of 6 and a viscosity of 2.89 cPs and homogeneous. Marketing is carried out online and offline to make it easier for consumers to reach and ensure safety given the pandemic situation. From the marketing results, the specific target consumers are women in their late teens to early adulthood. The selling price is set at IDR 22,500/bottle, but to attract consumers, a discount of 11.11% is given to IDR 20,000 and a free tester for the purchase of 3 bottles, and a total sale of 40 bottles. Based on testimonials obtained from consumers, on average they are satisfied and there have been no negative effects that have arisen during use.

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