



Innovation of Aromatherapy Product using Aceh Essential Oil

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Abstract

Nowadays, many Indonesian people return to various traditional medicinal plants to cure various diseases. This is due to the development of various sciences and technology, one of which is in the Atsiri field. Essential oils are often used as aromatherapy because they can foster a feeling of calm and can keep away from feelings of anxiety and restlessness. The use of essential oils from spices is a suitable choice of innovation in today's modern world of health. The purpose of this research is to make aromatherapy products using high-grade patchouli oil and essential oils of Acehnese spices that are efficacious for treating various diseases. The ingredients used in the manufacture of this product are high-grade patchouli oil, cajuput oil, nutmeg oil, cinnamon oil, clove bud oil, menthol, chamfers, and carrier oil. The research stage was started by developing the aromatherapy formulas, establishing the working procedures, and conducting quality testing. This spice aromatherapy product was tested on 25 respondents to determine its effectiveness on health. The results show that 68% respondents agree that spice aromatherapy products can affect body relaxation and 55% agree that they can improve sleep quality. As many as 88% of respondents agree that spice aromatherapy is effective for reducing headaches and catching colds and 84% of respondents agree that this product has an effect on relieving breathing. The results also show that all respondents agree that this product has a unique and classic aroma. However, there are some respondents (28%) who do not like this scent, while 72% really like it. These results show that spice aromatherapy products still need to be formulated to get other aroma variants to provide an alternative for consumers who do not like the strong aroma of spices.

Keywords: aromatherapy, essential oil, spices, unique and classic

1. INTRODUCTION

Many Indonesians return to various traditional medicinal plants these days in an effort to cure various diseases. This is due to the improvement of various sciences and technologies. Several studies also mention that many medicinal plants have been known to have various benefits for the body, such as plants that produce essential oils. Among them have functions as analgesics (anti-pain), anti-inflammatory, and antioxidants (Kurniasari 2017).

Essential oil is known as etheric oil or volatile oil which is one of the products of plant metabolism. It is volatile at room temperature, has a bitter taste, and smells good according to the smell of the producing plant. Essential oils are soluble in organic solvents and insoluble in water (Arniputi et al. 2007). Essential oils have various benefits, so they are widely used in various fields, including as raw materials for medicines because they have biological activities such as antiseptic, analgesic, antirheumatic, antidepressant and can also be used as insecticides and antifungals (Isnaini et al. 2022). Essential oils are also often

used as aromatherapy because they are able to foster a feeling of calm and can keep away from feelings of anxiety and anxiety. Aromatherapy is an alternative treatment method that is widely used today. It will stimulate the nerves in the brain under the balance of the cerebral cortex (Muchararidi 2008).

The rise of the trend of using aromatherapy as a health therapy causes product prices to increase in the market. So that product innovations are needed, can improve product quality to compete in the market at affordable prices. The use of spices which were initially only considered as kitchen ingredients by Indonesian people and most of the results of this spice plant are sold in the domestic market, and most of them are exported abroad, it turns out to have extraordinary properties in the world of health as a raw material for aromatherapy. The use of essential oils from Indonesian spices is a suitable choice of innovation in today's modern health world, not only because of the benefits of active ingredients that are nutritious for health, but also because of

the combination of the aroma of these spices, which are unique and have their own characteristics.

According to data obtained from Indonesian Essential Oil: The Scents of Natural Life, there are about 40 types of plants produced in Indonesia that have the potential as a source of aromatherapy, and about 12 other essential oil-producing plants are still in the industrial scale development stage. These plants have aromatic variations due to the presence of essential oils, namely essential oils. Research on the benefits of various essential oils has been widely studied, such as the following studies: Patchouli oil has therapeutic properties as an antidepressant, antiphlogistic, antiseptic, aphrodisiac, astringent, *cicatrisant*, *cytophylactic*, deodorant, diuretic, febrifuge, fungicide, insecticide, sedative and tonic. The quality of patchouli oil can be improved by vacuum distillation to obtain hi-grade quality (Muhammad et al. 2022). In aromatherapy, patchouli is used to calm nerves, control appetite, and relieve depression and stress. In high doses, it can stimulate and in low doses is a sedative (Shankaranarayan 2002).

Then cajuput oil or eucalyptus oil with its 1.8 cineole content can have potential as an anti-virus, anti-fungal, blood flow, respiratory tract, and blood vessels (Agustina 2017). Likewise with clove oil, besides being widely used in the community, in dentistry, it has long been used as a filling material, pulp capping, and pulpotomy, as well as a pain reliever. Besides being able to function as an analgesic and antiseptic on teeth, clove oil is also efficacious for relieving colds, stomach pain, or heartburn (Ninetti 2014).

Other studies have shown that cinnamon essential oil has antimicrobial, antifungal, antiviral, antioxidant, antitumor, blood pressure-lowering, anti-diabetic, memory-enhancing, and many other activities (Vangalapati et al. 2012). Besides using spice as essential oils, camphor and menthol are also considered important because they have good properties in aromatherapy applications. Camphor has a relaxing effect, has the potential to launch the respiratory system and the immune system. In topical use, camphor oil can relieve inflammation, insect bites, itching, irritation, sprains, muscle and joint pain. While menthol is useful in relieving breathe as well as reducing nausea (Kholibrina et al. 2021). *Myristica fragrans* Houtt from the Myristicaceae tribe, known as pala in Indonesia has been used traditionally for spices and medicines to enhance the immune system and anticarcinogen, aphrodisiac, antidepressant, antioxidant, antimicrobial. The uses of nutmeg as a medicine include nutmeg efficacious as korigensia (flavour enhancer), nutmeg seed as a carminative, to treat gastric spasms, aches and pains, insomnia, as a stimulant, and for canker sores (Alegantina 2009).

Based on the many benefits of each essential oil, currently essential oils are increasingly being used for various needs both in the health and beauty fields (Isnaini et al. 2022). As aromatherapy for example, actually the key to aromatherapy itself lies in the essential oil content contained in it. These ingredients give off various types of fragrance. Various types of aromatherapy fragrances have various functions and benefits that can be maximized in the form of a product. The

goal is to improve the health of the body, mind, and spirit (Sinthawati 2019).

Access to aromatherapy through the nose (inhalation) is an effective and much faster route compared to other means. The aroma that comes from eucalyptus oil and various other essential oils that are placed in a tube (roll on) will be captured by receptors in the nose and then provide further information to areas in the brain that control emotions and memory as well as provide information to the hypothalamus which regulates the nervous system internal of body, body temperature, and reaction to stress (Koensoemardiyah, 2009). Aromatherapy works by stimulating the nasal nerves and brain. When we inhale the vapours of essential oils or essential oils, the aroma will enter the nasal cavity and then stimulate the nervous system in the brain that plays a role in emotional setting.

With these various benefits, aromatherapy product innovation is considered prospective as a health product. The development of innovative products is expected to increase the added value of essential oil derivative products. In addition, the continuity of the manufacture of this product is also expected to improve the economy of local farmers because of market certainty. So that farmers can continue to produce and develop.

2. MATERIALS AND METHODS

The process of making aromatherapy spices is carried out at the essential oil processing laboratory (ARC) at Syiah Kuala University. This research centre (ARC) is engaged in essential oils and their derivative products. The use of natural ingredients from essential oils becomes an important concentration of knowledge and is currently being developed, including spice aromatherapy.

The ingredients used in the manufacture of this product are essential oil of patchouli, cajuput, nutmeg, cinnamon, clove bud, menthol, champers, and carrier oil. We add also some spice ingredient to the oil to make it look attractive. While the tools used are beaker glass, measuring glass, spatula and stirrer for mixing. The process begins with measuring each oil raw material that will be used, then put the carrier oil into a beaker glass then add the essential oils of patchouli, cajuput, nutmeg, cinnamon, clove bud, menthol and champeta. Stir until well blended using a stirrer. Prepare a packaging bottle then enter the spices such as cinnamon, cardamom and cloves first. Then enter the oil solution that has been made into a 10 ml bottle. Spice aromatherapy oil is ready to use

Preparation Evaluation Test

This study aims to see the effect of using aromatherapy products on respondents. Testing on this product was carried out using two methods, the first to see how the product formulation was made in order to obtain a balanced aromatherapy product. Then, laboratory testing is carried out with the active ingredient formula based on the balance of the product formulation results that are most suitable for its impact. The second uses the theory of perception. Perception is one of the important psychological aspects for humans in responding to the presence of various aspects and symptoms

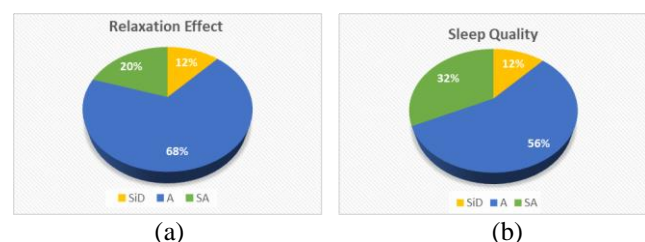
around them. Sugihartono et al. (2007) suggested that perception is the brain's ability to carry out a stimulus or process to translate the incoming stimulus into the human senses. In human perception there are different points of view in sensing. Bungin (2001) said that basically research data can be grouped into two types, namely qualitative and quantitative data.

Data used in this study are qualitative and quantitative data. Quantitative data were obtained from observations, questionnaires, in-depth interviews, and documents related to the production of the product. The primary data sources in this study consisted of 25 respondents from various age, educational and occupational backgrounds. Secondary data sources consist of documents, literature, books, previous research results, journals, pictures and other writings related to the manufacture of this product.

To evaluate consumer acceptance of aromatherapy products, a survey was conducted on respondents. Twenty-five respondents were selected to be asked about several questions related to the product. Aromatherapy items were evaluated for their sensation after inhalation, their ability to create relaxation, improve sleep quality, and their perceived ability to reduce symptoms of headaches, colds, and difficulty in breathing. As well as responses to the product's shape in terms of visual appearance and aroma generated. The Likert scale is used to evaluate aromatherapy spice products. The Likert scale is a bipolar scale used to measure positive and negative responses to a statement. Therefore, respondents indicate their level of agreement with a statement by selecting one of five possible responses: strongly disagree, disagree, less agree, agree, and strongly agree.

3. RESULTS AND DISCUSSIONS

Since the last decade, consumers have become more selective about the personal care products that they use. Although many similar products are available, high quality and competitively priced products will fulfil customer satisfaction and increase customers' loyalty to the product. The spice aromatherapy products in this study are a research innovation that explores the formulation of fragrances of various kinds of typical spice essential oils that have a unique aroma and various properties that are good for the body.



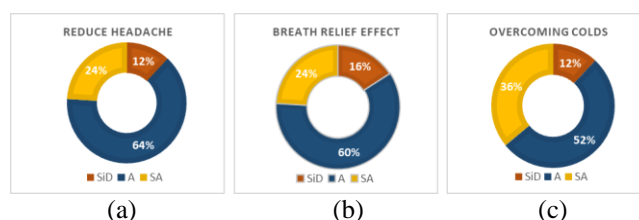
SiD = Slightly Disagree, A = Agree, SA = Strongly Agree

Figure 1. Percentage of responders' rating their level of relaxation and sleep quality

According to the figure above, up to 68 percent of respondents agree that this spice aromatherapy oil can help

the body relax, and 55 percent agree that it can improve sleep quality, resulting in a more restful night's sleep. This relaxing effect can be caused by the aroma of essential oils, which will then stimulate the hypothalamus area of the brain to produce serotonin, which can improve mood.

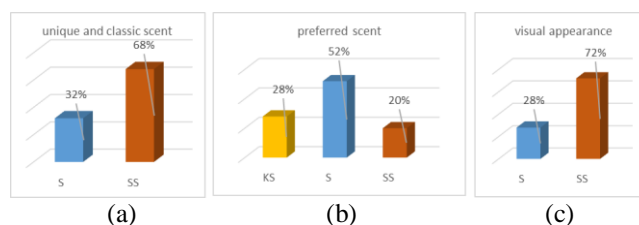
This result is also supported by Ali (2015), which shows that aromatherapy products promote human health by relaxing the body, refreshing the mind, enhancing mood, and acting as a placebo in treating disease with physiological effects. However, there are 12% of respondents disagree that aromatherapy can have the effectiveness of relaxation and improve sleep quality. These results show that the product still has to be optimized in terms of formulation to make it more acceptable to the market.



SiD = Slightly Disagree, A = Agree, SA = Strongly Agree

Figure 2. Percentage of responders' rating of the effectiveness of treatment on the body

Figure 2 shows the respondent's judgment of the effectiveness of aromatherapy spices in reducing headaches, relieving breathing, and catching a cold. After testing, 88% of respondents agree that this spice aromatherapy can reduce mild headaches and catching colds, and 84% agree that it can relieve breathing. The reason is that the active ingredients are eucalyptus oil, clove oil, nutmeg oil, and menthol, which are efficacious as anti-pain, smooth breathing, and relieve nausea when colds occur. While as many as 12% of respondents said they did not agree regarding the effectiveness of reducing headaches and colds, this was due to differences in the level of pain felt by respondents. This product can be used by applying it to the sore head, abdomen, and shoulders to treat colds and inhaling to relieve breathing.



SiD = Slightly Disagree, A = Agree, SA = Strongly Agree

Figure 3. Percentage of responders' ratings of product aroma and visuals

In addition to analyse the benefits and efficacy of the product, organoleptic tests were also conducted to determine

the respondents' preferences for the visual appearance and aroma of this spice aromatherapy product. In addition to analysing the benefits and efficacy of the product, organoleptic tests were also conducted to determine the respondents' preferences for the visual appearance and aroma of this spice aromatherapy product. Based on the picture (a) above, it can be seen that all respondents agree that this spice aromatherapy has a unique and classic aroma, with a percentage of 68% saying strongly agree and 32% agree. The reason related to the results is that, in the manufacturing process, this product uses a blend of selected spice oils with a certain concentration to produce a unique aroma.

Meanwhile, as illustrated in Figure 3(b), up to 28% of respondents disagree that this product has a fragrant aroma and is preferred; 52% agree, and 20% strongly agree. It shows that respondents have different preferences. The background of the respondents also influences the difference in the level of preference for this aroma. Most of the respondents who disagreed were young people under the age of 25 years. While those who answered strongly agree with the product's aroma are those, who are over 40 years old.

The percentage of respondents' preference for the visual appearance of spice aromatherapy products is depicted in Figure 3(c). When asked about their visual preference for the product, all respondents agreed that it has an attractive and unique visual appearance because it features real spices with variations in the colour of the material, which makes the product appear more attractive and elegant, as illustrated in the following Figure.



Figure 4. Packaged spice aromatherapy products

This spice aromatherapy product is not only used for consumption (treatment by means of smearing and inhalation), but can also be used as souvenirs, gifts, and can be further developed into a business that promotes innovation in natural raw materials so that many benefits are obtained both for entrepreneurs, workers, users and the people involved in it.

4. CONCLUSIONS

The study of making spice aromatherapy from essential oils shows the following results: 1) In general, (68%) respondents agree that spice aromatherapy products can

affect body relaxation and 55% agree that they can improve sleep quality. 2) As many as 88% of respondents agree that spice aromatherapy is effective for reducing headaches and catching a cold, and 84% of respondents agree that this product has an effect on relieving breathing. 3) The results also show that all respondents agree that this product has a unique and classic aroma because it is produced from a blend of selected spice oils with a certain concentration. However, 28% of respondents dislike this fragrance, while 72% like it very much. This result shows that spice aromatherapy products still need to be formulated to get other aroma variants to provide an alternative for consumers who do not like the strong aroma of spices.

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