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THE 13TH INTERNATIONAL INNOVATION, INVENTION & DESIGN COMPETITION 2024

EXTENDED ABSTRACTS

e-BOOK

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ESSENTIAL OIL FROM CARICA SEEDS

Daniar Prabayuditha¹, Muhammad Ramdani Nasution², Pinky Hamdhan Sari³, Uly Urroza Ramadanti⁴

^{1,2,3,4}Faculty of Business and Economics, Faculty of Mathematics and Natural Sciences,
Universitas Islam Indonesia, Sleman Regency, Special Region of Yogyakarta, Indonesia

21313023@students.uii.ac.id, 21313080@students.uii.ac.id, 21313128@students.uii.ac.id 22231033@students.uii.ac.id

ABSTRACT

Carica pubescens or what is commonly known as mountain papaya is a fruit that can only grow only in certain highland areas. Carica seed essential oil is created by combining carica seeds with other ingredients such as N-hexane and distilled water. The oil has a distinct scent (sweet and refreshing). Essential oils are typically utilised by dropping them into a diffuser or combining them with other ingredients in aromatherapy candles. The use of carica seed oil extract varies individually. If essential oils have been used, the aroma might permeate the room for 8-9 hours. The aroma created by this essential oil can provide a variety of health benefits. Using carica seeds as the raw material for manufacturing essential oil is a new notion and it is expected to attract more consumers.

Keywords: Carica seeds, essential oils, innovation

1. INTRODUCTION

Carica seeds essential oil is an oil extract derived from the carica fruit (*Carica pubescens*). This plant is commonly found in tropical environments, particularly in highlands. Carica is a fruit commodity that grows abundantly in the Dieng plateau area of Wonosobo Regency, Central Java. Carica fruit flesh is commonly used in desserts, but the seeds and skin are wasted. As a result, carica seeds require innovation so that they do not go to waste.

Carica seeds have a unique smell, thus they can be utilised to produce essential oil. Research done by Tidar University's found that the aroma of carica seeds extract can last for up to 9 hours. It is envisaged that the ensuing product innovation will aid individuals in overcoming stress problems, relaxing bodily muscles and mental stress, and providing a sense of freshness in the area. Carica seeds essential oil is commonly utilised by putting it into a diffuser or combining it with aromatherapy candles. The use of carica seeds oil extract can be tailored to each individual's needs. The sweet and refreshing perfume of this essential oil can permeate the entire room, producing a peaceful and refreshing mood.

The body can also benefit from the use of essential oil extracted from carica seeds. The perfume created can help to relieve stress, reduce muscle tension, and provide a sense of relaxation and freshness. The use of carica seeds as raw material for essential oil is a positive step that is predicted to pique people's interest in utilising it. With the potential benefits of carica seed essential oil, it is believed that this product will be a good choice for people looking for a natural way to relax and refresh themselves. This concept aims to convert carica seed waste into value-added products that are good for health and wellbeing. Awareness of the natural benefits of plants is becoming increasingly important in efforts to maintain balance and harmony in life.

Thus, essential oil extracted from carica seeds is not only a pleasant aromatherapy product, but also a symbol of innovation that promotes the sustainable use of natural resources. Hopefully, this

product will make people more conscious of the potential scent and natural benefits of the plants around them.

2. METHODOLOGY

2.1. Ingredients : Carica seeds, N-hexane, distilled water, filter paper, thread

2.2. Tools : Soxhlet tool, blender, balance, spatula, beaker

2.3. Methods : Basic steps for making essential oil from carica seeds.

- i. Prepare the necessary tools and materials
- ii. Puree the carica seeds using a blender
- iii. Weigh the filter paper
- iv. Weigh 20 grams of carica seeds and wrap them in filter paper, this is done 5 times.
- v. Inserted into Soxhlet and tool chain
- vi. Put approximately 300 mL of N-hexane into the distillation flask
- vii. Turn on hot plate and water flow
- viii. Wait until all the oil in the carica seeds comes out
- ix. The mass and volume of oil obtained were weighed

3. FINDINGS

The carica seed extraction procedure yields an oil with a sweet and refreshing scent. The longer the extraction process, the more oil produced. The time needed to produce 150ml of carica seeds extract is 4-5 hours. Carica seeds essential oil has several benefits, including the ability to relieve stress, relax body muscles and mental stress, and provide a sense of freshness in the room. This product invention deserves to become a popular choice of air freshener and is a game changer in terms of increasing its consumers' mood.

The essential oil extracted from carica seeds has a distinct, sweet, and refreshing aroma, making it an appealing choice for aromatherapy applications. The resulting aroma will linger in the room for 8 to 9 hours after application. Carica seeds oil extract can be utilised in a variety of ways, including dripping it into a diffuser or combining it with other ingredients in aromatherapy candles. Carica seed essential oil has numerous health advantages for both the body and the mind. This essential oil might be an appealing choice for people looking to improve their quality of life through aromatherapy, as it can relieve stress and provide freshness. Carica seed essential oil is appealing to consumers who appreciate innovation in health and beauty products due to its wide range of benefits.

4. CONCLUSION

Research achieved to extract essential oil from carica seeds was able to provide information about new breakthroughs in the field of respiratory health that were maintained by utilising carica seed waste that was previously regarded no longer commercial. This study will demonstrate the potential benefits of the essential oil as well as consumer acceptability of the product. The findings of this study will be useful for those interested in developing and innovating this product, allowing it to reach a larger market. Based on the research on essential oil derived from carica seeds, it is possible to infer that this innovation contributes significantly to the creation of natural and sustainable aromatherapy products. This research proved the huge potential of this essential oil by using carica seeds that were

previously deemed waste. It is believed that the findings of this study would provide a solid foundation for those interested in the creation and innovation of environmentally friendly aromatherapy products. Carica seed essential oil exemplifies attempts to ethically maximise the potential of natural resources while also adding value to human health and well-being. This product's distinctive sweet and refreshing perfume can give a variety of benefits, including stress relief and the creation of a soothing environment in the room.

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