

UNI

VERSITI

THE 11TH INTERNATIONAL INNOVATION, INVENTION & DESIGN COMPETITION INDES 2022

EXTENDED ABSTRACTS BOOK



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Perpustakaan Negara Malaysia

Cataloguing in Publication Data

No e-ISSN: e-ISSN 2756-8733



Cover Design : Nazirul Mubin Mohd Nor Typesetting : Wan Nurul Fatihah binti Wan Ismail

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The 11th International Innovation, Invention and Design Competition 2022

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Office of Research, Industrial Linkages, Community & Alumni Networking (PJIM&A) Universiti Teknologi MARA Perak Branch

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Academy of Language Study Universiti Teknologi MARA Perak Branch



GARCIN-P: A SKIN CREAM FROM GARCINIA PRAINIANA (MENCUPU) AS SKIN INFECTION FIGHTER

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ABSTRACT

Garcinia prainiana which is commonly known as *'mencupu'* is one of the species from the family of Clusiaceae. The aim of this work is to prepare skin cream which is known as Garcin-P from the stem bark of *G.prainiana* and to evaluate the use of Garcin-P to treat skin problems. The water in oil emulsion method was used in the preparation of Garcin-P skin cream. Application of this cream on skin may reduce skin problems such as skin itching and inflammation. The result revealed that Garcin-P has the potential to be utilized as an alternative remedy to combat skin infection.

Keywords: Garcinia prainiana, antioxidant, skin problem, mencupu

1. INTRODUCTION

It is known that about 400 species of genus of *Garcinia* are distributed across Asia and 49 species have been reported to grow in Malaysia. *Garcinia prainiana* which is commonly known as 'mencupu' is one of the species from the family of Clusiaceae. The lack of scientific studies on antioxidant activity and total phenolic content of stem bark of *G. prainiana* has led us to investigate the potential of this plant as an antioxidant source. Our current study revealed that ethyl acetate and methanol extracts of *G. prainiana* stem bark exhibited promising antioxidant activity, with IC₅₀ values of 97.9631 µg/ml and 125.0517 µg/ml, respectively and total phenolic content of 112.2086 mg GAE/g sample. (Daud et al., 2022). This plant is also found to contain terpenoid compound which is responsible for antibacterial action against skin disease caused by bacteria. Previous study has reported the antioxidant and antibacterial activity of the leaves, fruit, and twigs of *G. prianiana* (Asang et al.,2018; Darwati et al., 2019) but not for the stem bark. Since the polar extract exhibited promising antioxidant activity, the water extract from *G. prainiana* stem bark is used in the formulation of skin cream from *G. prainiana*.

2. METHODOLOGY

The water extract of *G. prainiana* stem bark was dispersed in oil mixture using dispersion method. The water was added in oil emulsion until the perfect cream texture was obtained. No linolin was added in Garcin-P skincream as most linolin are taken from non-halal source and this indicates the novelty and uniqueness of Garcin-P skin cream.



3. FINDINGS

The following figures show the result of the application of products from Garcin-P skin cream. It seems that the severity of the inflammation reduces. The potent result might be due to the presence of antioxidative phenolic compound. Moreover, the presence of other active compound such as saponin might have probably contributed to the result obtained. Phenolic compound also can act as antibacterial just like saponin and terpenoid. Garcin-P skin cream is also free from non-halal ingredients and everyone can apply without hesitation.



A: Day 1 B: Day 3



4. CONCLUSION

The Garcin-P skin cream was successfully formulated from water in oil emulsion procedure. The application of Garcin-P helps to reduce the severity of skin problem as well as makes the skin stay healthy. Since Garcin-P was formulated without linolin, everyone can apply it without hesitation.

REFERENCES

Asang, G.S., Mohd Khairuddin, N.N., Alias, N., Ahmad, A. & Wan Taib, W.R. (2018). Antioxidant and antimicrobial activity of different plant parts of garcinia prainiana- An endangered plant.

International Journal of Engineering & Technology, 7 (4.43):24-2

- Daud, S., Salim, K.S., Harun*., Ishak, Z.I., Mat Hussin, Z. & Seman@Kamarulzaman, A.F. (2022). Antioxidant activity and total phenolic content of garcinia prainiana stem bark. *GADING Journal of Science and Technology*, 5(1):26-35.
- Darwati, D., Tsamrotul, A., Herlina, T., Mayanti, T., Nurlelasari, N., Haikal, K.& Supratman, U.(2019). Triterpenoids from the bark of garcinia porecta and their cytotoxic activity against MCF7 breast cancer lines. ALCHEMY Jurnal Penelitian Kimia, 15(1):1-9.

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