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ABSTRACT BOOK

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ANTIBACTERIAL ACTIVITY AGAINST *Staphylococcus aureus* FROM METHANOL EXTRACT OF MANGOSTEEN RIND (*Garcinia mangostana* L.)

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ABSTRACT

Staphylococcus aureus is one of bacteria that could cause acne. Xanthone in mangosteen rind extract known had antibacterial activity. In this study, the antibacterial activity of methanol extract of mangosteen rind (*Garcinia mangostana* L.) against *Staphylococcus aureus* was determined. This study will be the basis for development of pharmaceutical preparation for acne with extract of mangosteen rind (*Garcinia mangostana* L.) as active ingredients. In this research, the extraction is done by maceration method using methanol in dried mangosteen rind. Extract was freeze dried in order to get dry powder. Antibacterial activity against *Staphylococcus aureus* is tested with disc diffusion method (Kirby & Bauer test). Results showed the value of Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC) of the methanol extract of mangosteen rind against *Staphylococcus aureus* was 0.2 % (g/ml) and 0.6 % (g/ml)

Keywords: mangosteen, *Staphylococcus aureus*, MIC, MBC

ANTAGONISTIC ACTIVITY OF *Salacca zalacca* PEEL AGAINST *Staphylococcus aureus* ATCC 25923 AND METHICILLIN-RESISTANCE *Staphylococcus aureus* ATCC 33591

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ABSTRACT

Nowadays an increase in bacterial resistance has leadto the necessity to explore new antimicrobials from various sources. Plants are the richest bio-resources of traditional medicinal system for centuries. Bali has an indogenous plant named snake fruit (*Salacca zalacca*) which is commonly used as food, yet its peel usually becomes a waste. However, the peel contains flavanoid, tannin, alkaloid dan hidrokuinon. Based on that informations, it is interesting to further investigate this snake fruit peel as a potential source of antibacteria. The experiment used a completely randomized design in which the extract of Snakefruit (*Salacca zalacca*) peel was applied as treatments. The bacterial strains used in this study were *Staphylococcus aureus* ATCC 25923 and MRSA (Methicillin-resistance *Staphylococcus aureus*) ATCC 33591. All treatments were repeated four times. This reseach was conducted to determine the bacterial activity of Snakefruit peel extract by measuring the diameter of inhibition zone (mm). The results showed that the widest diameter inhibition zone towards MRSA ATCC33591 was shown by 50% concentration with diameter inhibition zone of 15.8

± 0.76 mm. This indicated that the snake fruit (*Salacca zalacca*) peel has potential as a new alternative source of antibacteria and could be an alternative solution to cope with bacterial resistance on antibiotics.

Keywords: snakefruit, antibacterial, MRSA

