

ANTIOXIDANT AND ANTIBACTERIAL ACTIVITIES OF *Garcinia mangostana* PERICARP

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ABSTRACT

ANTIOXIDANT AND ANTIBACTERIAL ACTIVITIES OF *Garcinia mangostana* PERICARP

Mangosteen is a tropical fruit usually found in Southeast Asia in countries like Malaysia, Singapore, Thailand, China and Cambodia. Botanical's name of mangosteen is *Garcinia mangostana* and it is referred to "the queen of fruits" in Asia. Mangosteen pericarp is known to contain unique chemical compound called xanthenes. Studies had shown that pericarp of *Garcinia mangostana* exhibit beneficial biological effects especially in their antioxidant and antibacterial activity. In this study, the three different types of solvents were used is hexane, chloroform and ethanol which have different polarity by maceration extraction. These three types of extract were used to measure their antioxidants and antibacterial activity by using DPPH assay and Disc Diffusion method. In DPPH assays, ethanol extract shows highest effect on scavenging free radicals followed by hexane and chloroform extract. Ethanol extract gave the highest percentage scavenging 87.01 % at concentration 1000 µg/ml. In Disc Diffusion method, ethanol extract also shows strongest antibacterial activity against gram-positive bacteria *Staphylococcus aureus* and *Bacillus subtilis* and gram-negative bacteria *Salmonella typhimurium* and *Escherichia coli* followed by chloroform and hexane extract as in ethanol extract contains large in number of chemical compound with antibacterial properties.