ANTIMICROBIAL AND PHYTOCHEMICAL SCREENING OF *Carica papaya* LEAVES AGAINST BACTERIA CAUSING FOOD POISONING

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ABSTRACT

ANTIMICROBIAL AND PHYTOCHEMICAL SCREENING OF *Carica papaya* LEAVES AGAINST BACTERIA CAUSING FOOD POISONING

Nowadays, there is the presence of bacteria which resistance toward antibiotic as it is one of the fast cure medicine. This resistance causes the rising number in food poisoning cases to occur. The aims of this study were to determine the antimicrobial activity of papaya leaves against bacteria causing food poisoning and observed the phytochemical that presence in the sample. In this research, three different polarities of solvent were used to extract dried sample of papaya leaf which hexane (non-polar), ethyl acetate (semi-polar), and methanol (polar). The result from the extraction show that methanol has higher percentage yield followed by ethyl acetate and hexane. The phytochemical compounds that presence in each extracts were steroid, phenolic, tannin, terpenes and flavonoid. The results for antibacterial activity of *C. papaya*, showed that methanol has good antibacterial activity against *P. eruginosa* with 5.3 ± 4.0 mm at the concentration of 120 mg/mL meanwhile *S. aureus* had 3.0 ± 1.7 mm . *P. aeruginosa* and *S. typhi* were found to be lowest minimum inhibitory concentration (MIC) value with 7.5 mg/mL. This showed that *C. papaya* methanol extract have a potential as new antimicrobial agent against bacteria causing food poisoning.

For the further study, the method of extraction can be improved by using Microwave assisted extraction (MAE) which reduced the extraction time and solvent volume. For the phytochemical screening, it can be improved by using a quantitative measurement for active antimicrobial compound in the extract.