

**ANTIBACTERIAL ACTIVITY OF MALE FLOWER BUD AND
BLOOM OF *Carica papaya***

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ABSTRACT

ANTIBACTERIAL ACTIVITY OF MALE FLOWER BUD AND BLOOM OF *Carica papaya*

Carica papaya or also known as papaya has many beneficial benefits to human organisms. Some of the benefits are it helps to protect against heart disease, promote digestive health, anti-inflammatory and many other great benefits. Although papaya fruit and seeds have many great advantages to human organisms, papaya male flower often neglected. Nevertheless, the potential and versatility of male flower of papaya have not been completely explored. The aims of this project were to determine the antibacterial activity of *Carica papaya* male flower bud and bloom. The results of this study showed that six different concentration of extracts of bud and bloom displays different zone of inhibition towards bacteria *Escherichia coli* and *Staphylococcus aureus*. Both bud and bloom extract showed highest inhibition zone at 100 mg/ml concentration. Bud extracts showed 2 ± 1.73 zone of inhibition for *E.coli* and 0.33 ± 0.58 for *S.aureus*. Bloom extracts showed 3.33 ± 1.15 zone of inhibition for *E.coli* and 0.33 ± 0.58 for *S.aureus*. Antibacterial and antibiotic susceptibility test for bacteria was conducted to determine the susceptibility of bacteria *Escherichia coli* and *Staphylococcus aureus* towards the male flower bud and bloom extracts. Erythromycin antibiotic sensitivity discs was used to test the antibiotic susceptibility of the bacteria and served as a positive control. After the bacteria culture containing extracts discs has been incubated for 24 hours at 37°C, zone of inhibition was obtained and it was observed that at 100 mg/ml concentration, the susceptibility of the bacteria is the highest compared to other five concentrations. The characterization of bacteria was done based on Gram staining, morphological and other biochemical tests such as Indole test, Voges-Proskauer test and Methyl-Red test. As a conclusion, the suitable concentration for bud and bloom extracts is 100 mg/ml and recommendation for future research is to use dried sample of *Carica papaya* male flower instead of fresh sample.