

**ANTIBACTERIAL ACTIVITY OF *Areca catechu* NUT
EXTRACT**

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ABSTRACT

ANTIBACTERIAL ACTIVITY OF *Areca catechu* NUT EXTRACT

Areca catechu nut that is commonly known as Betel nut is an ancient herb which is significant to the cultural traditions of some countries in the South East Asia. The case of bacterial resistance to the existing antibacterial agents has increased, causing the need of novel antibacterial agent. However, the use of Betel nut as the antibacterial agent has not been reported in Malaysia. This study is carried out to determine the antibacterial properties of the young and the mature Betel nut, and to differentiate the strength of the antibacterial properties between both extracts. Both sample extracts were diluted into varying concentrations and were tested with *Escherichia coli*, *Salmonella typhi* and *Staphylococcus aureus* isolates by implementing disc and agar well diffusion methods. The result showed an increase in the extract concentration shown by the increase in the halo zone. Agar well method showed a larger halo zone compared to the disc method. *S.aureus* is most susceptible to both extracts with the highest mean of halo zone at 200mg/ml is 17.7 ± 0.58 mm, followed by *S.typhi* with 14.7 ± 0.58 mm while *E.coli* is the most resistant bacteria with no zone of inhibition. This result indicates that Betel nut can be used as the medicinal agent to combat diseases associated with common bacteria due to the antibacterial effect elicited from both samples. Nevertheless, the young extract showed a slightly stronger antibacterial property strength compared to the mature extract.