

**PHYTOCHEMICAL SCREENING AND ANTIMICROBIAL
ACTIVITIES OF *Dialium indum***

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ABSTRACT

PHYTOCHEMICAL SCREENING AND ANTIMICROBIAL ACTIVITIES OF *Dialium indum*

Dialium indum or also known as keranji in Malay is a type of tree that grows wild in forest or forest edge and grows through seeds. These trees are growing wild in lowland forest in Malaysia, Thailand and Indo-China. Nevertheless, there is too little study has been recorded about *Dialium indum* especially its phytochemicals and antimicrobial activity. The aim of this study is to identify the phytochemicals available and antimicrobial activity in *D. indum* fruit pulps extracts. Three different types of solvents which are methanol, cyclohexane and dichloromethane are used to identify the phytochemical contents and antimicrobial activities in *D. indum*. For antimicrobial activity study, *Staphylococcus aureus*, *Bacillus subtilis* and *Escherichia coli* were chosen for the purpose of testing the antimicrobial activities in *D. indum*. The *D. indum* solvent extracts were prepared at various concentration ranging 25 – 100 µg/µl and disc diffusion assay method was used to observe the zone of inhibition in each solvent extracts before the results were analyzed statistically. Result showed that methanol extract managed to extract tannins, flavonoids, terpenoids, saponins and alkaloids from *D. indum* fruit pulp. Whereas antimicrobial activity shown better result in cyclohexane extract compared to methanol extract and DCM extract in the plates containing *B. subtilis* and *E. coli* with most of zone of inhibition present in cyclohexane extracts were bigger than methanol extracts and DCM extracts whereas methanol extract showed the highest zone of inhibition compared to DCM extract and cyclohexane extract in the plates containing *S. aureus*. From the results obtained, *D. indum* fruit pulps have the potential to be developed as antibiotics due to large zone of inhibition presented by the *D. indum* extracts. In addition, the phytochemical contents present in *D. indum* also have antimicrobial properties that contributed to the antimicrobial activity in *D. indum* extracts.