

**PHYTOCHEMICAL SCREENING, ANTIFUNGAL AND  
ANTIBACTERIAL PROPERTIES OF *Musa acuminata* PLANT**

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## ABSTRACT

### PHYTOCHEMICAL SCREENING, ANTIFUNGAL AND ANTIMICROBIAL PROPERTIES OF *Musa acuminata* PLANT.

Banana is one of the most widely grown tropical fruits, which was cultivated over 130 countries and can be found easily in Malaysia. Generally, the plant is known for its edible fruits and the uses of the leaves as food wrapper in industries. For this study, the non-edible part which is the leaves of *Musa acuminata* 'Dwarf Cavendish' plants were analysed to determine the phytochemical constituents and antimicrobial properties. Two types of organic solvents used, which were hexane and methanol. Both extracts were tested for phytochemical and antimicrobial properties. The antimicrobial properties of the extract produced were tested against *Staphylococcus epidermidis* and *Tricophyton mentagrophytes* using disc-diffusion method. Phytochemical screening done on the sample showed that the methanolic extract contains bioactive components such as tannins, alkaloids, flavonoids, phenols, terpenoids and saponins whereas hexane extract indicated the presence of alkaloid. Proven that methanol solvent showed higher efficiency in extracting phytochemical constituents compared to hexane. The methanolic extract of the leaves showed positive effects towards tested microorganisms whereas hexane extract showed vice versa. The best concentration of methanolic extract against *S. epidermidis* was 60 mg/ml and *T. mentagrophytes* were 40 mg/ml forming inhibition zone with diameter of 4 mm and 5 mm, respectively. Methanolic extract against *S. epidermidis* is comparable to ampicillin. Meanwhile, it is remarkable that methanolic extract of *M. acuminata* leaves showed stronger antifungal properties compared to nystatin. As a conclusion, the methanolic extract of the leaves of *M. acuminata* 'Dwarf Cavendish' can be nominated as potential drug due to their strong antifungal properties.