UNIVERSITI TEKNOLOGI MARA

ANTIMICROBIAL PROPERTIES OF *PHYLLANTHUS ACIDUS* WATER EXTRACT ON ORAL MICROBE

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APPROVAL FORM

I hereby recommend that the thesis prepared under my supervision by Wan Muhammad Taufik bin Wan Taman entitle 'Antimicrobial Properties of *Phyllanthus acidus* Water Extract on Oral Microbe' be accepted in partial fulfilment of the requirements for the degree of Bachelor of Pharmacy from Faculty of Pharmacy, UiTM.

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ABSTRACT

The purpose of this study is to investigate the antimicrobial property of the *Phyllanthus acidus* water extract against oral bacteria. *Phyllanthus acidus* is one of the tropical plant species commonly found in Malaysia. This species has been used in traditional medicine for various purposes. This antimicrobial study was done by using a microdilution method in a 96 well round-bottom microtiter plate. *Staphylococcus aureus* and *Lactobacillus casei* which are commonly found in oral cavity have been tested in this study. This experiment was conducted by culturing the bacteria into media and the cultured media was incorporated into eight different concentrations of *Phyllanthus acidus* extract in wells of microtiter plate. The result of this experiment was obtained by observing the ability of the different concentration of extract to inhibit the growth of bacteria in wells. From the study, it showed that the *Phyllanthus acidus* water extract has the ability to inhibit the growth of *Staphylococcus aureus* and *Lactobacillus casei* at mean concentration of 3.5 mg/ml and 0.55 mg/ml respectively. In conclusion, it is proved that *Phyllanthus acidus* water extract has the ability to be utilized as an antimicrobial agent in the production of mouthwash.