

**PHYTOCHEMICAL SCREENING AND ANTIMICROBIAL ACTIVITIES  
OF *Diospyros blancoi* LEAVES AGAINST SELECTED BACTERIA**

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## ABSTRACT

### **Phytochemical Screening and Antimicrobial Activities of *Diospyros blancoi* Leaves Against Selected Bacteria**

*Diospyros blancoi* which also known as 'Pokok mentega' is a species from family of Ebenaceae. The plant bark was known of its properties in treating diarrhea, dysentery, fever and cough. The fruit part has been used to treat wound and aphthous stomatitis. The *D. blancoi* extract can be used as an alternative drug to treat diseases. The methanol and hexane extract of *D. blancoi* leaves was investigated for the difference in amount of yield, phytochemical constituents, antimicrobial activities and minimum inhibitory concentration (MIC). For 200 g of dry weight, extraction in methanol yield more than in hexane which is 40.52 g and 5.85 g respectively. In methanol extract, alkaloids, flavonoids, and tannins were detected. Whereas in hexane extract, flavonoids, tannin and saponin were found. In disk diffusion of methanol extract, give highest antimicrobial activity at concentration 400 mg/ml against *B. subtilis* with 13.6 mm of inhibition zone and lowest antimicrobial activity was against *P. aeruginosa* which no inhibition zone was formed at all level of concentration. On the other hand, the disk diffusion of hexane extract did not give any inhibition zone at all concentration against all bacteria tested. In minimal inhibitory concentration (MIC) determination of methanol extract, the MIC of *S. aureus*, *B. subtilis* and *K. pneumoniae* was determined at 50 mg/ml, 25 mg/ml and 50 mg/ml respectively. The effectiveness of *D. blancoi* was affected by the level of concentration of extract and bacteria species. Besides, both extract cannot elicit inhibition zone against *P. aeruginosa*. This means that the extract cannot replace antibiotic such as gentamicin. Further investigation on another part of plant such as root and fruit flesh is recommended to use against *P. aeruginosa* for antibiotic susceptibility testing.

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