

**PHYTOCHEMICAL SCREENING OF *Parkia speciosa* SEEDS**

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This Final Year Project Report entitled “**Phytochemical Screening of *Parkia speciosa* Seeds**” was submitted by Nur Syahida Binti Akryl Azam, in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Chemistry, in the Faculty of Applied Sciences, and was approved by

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## ABSTRACT

### PHYTOCHEMICAL SCREENING OF *Parkia speciosa* SEEDS

*Parkia speciosa* seeds were used in this research to investigate Thin Layer Chromatography (TLC) profile and its ability for antibacterial activity as well as to identify the secondary metabolites present through phytochemical screening. The seeds undergo cold extraction process after grinding into powder. The powdered seeds were macerated successively into hexane, ethyl acetate and methanol for 72 hours at room temperature and were concentrated by rotary evaporator to obtain the crude extracts. Each crude extracts were tested by using a suitable solvent polarity ratio to obtain the best respective TLC profile before proceed to phytochemical screening tests to confirmed the presence of flavonoid, alkaloid, terpenoid, phytosterol, steroid, phenol, tannin, saponin and glycoside. Ratio of hexane : ethyl acetate (2 : 3) eluent was the best to fractionate methanol crude extract meanwhile for ethyl acetate crude extract, hexane : acetone (3 : 2) was the most suitable eluent. For hexane crude extract, hexane : chloroform (1 : 4) was identified. Methanol crude extract showed positive results for the presence of flavonoid, alkaloid, terpenoid, steroid and glycoside. Whereas, tannin, phenol, steroid and terpenoid were present in ethyl acetate crude extracts. Only phytosterol was present in hexane crude extract. Two types of bacteria, Gram positive (*Staphylococcus aureus* and *Bacillus subtilis*) and Gram negative (*Salmonella typhi* and *Escherichia coli*) were used in the antibacterial activity using disc diffusion method. Streptomycin and dimethyl sulfoxide (DMSO) involved as the positive and negative control respectively. Only methanol crude extract of *P. speciosa* seeds showed the highest inhibition zone against *B. subtilis* with 11.5 mm while the lowest inhibition zone was against *S. typhi* with 7.5 mm for its antibacterial activity.