

**EVALUATION OF ANTIMICROBIAL PROPERTIES AND
TOXICITY OF *Nephelium lappaceum* L. EXTRACT**

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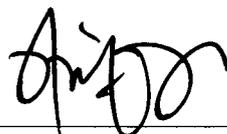
This Final Year Project Report entitled “**Evaluation of Antimicrobial Properties and Toxicity of *Nephelium lappaceum L. Extract***” was submitted by Izzah Izzati binti Nodin, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by



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ABSTRACT

EVALUATION OF ANTIMICROBIAL PROPERTIES AND TOXICITY OF *Nephelium lappaceum L* EXTRACT

A study has being conducted on the *Nephelium lappaceum L.* leaves methanolic extract. The study aims to evaluate the antimicrobial activity of methanolic extract of the *N. lappaceum L.* leaves and to evaluate the acute toxicity properties of methanolic extract of *N. lappaceum L.* leaves. All different concentration of extract ranging from 50 mg/ml, 100 mg/ml, 200 mg/ml, 300 mg/ml and 400 mg/ml were tested against Gram-positive bacteria, *Bacillus subtilis*, *Staphylococcus aureus* and Gram-negative bacteria, *Escherichia coli*, *Pseudomonas aeruginosa*. The antimicrobial activities of the extract were determined by the disc diffusion method, mimimum inhibitory concentration method and minimum bactericidal concentration method. Zone of inhibition of extracts were compared with the standard antibiotic, Streptomycin which acts as positive control, while DMSO (10%) used as negative control. The highest antimicrobial activity exhibited against *P.aeruginosa* which was about 17.3 mm \pm 1.53 compared to *E.coli* which did not show any activity. The lowest minimum inhibitory concentrations were 50 mg/ml against *P.aeruginosa*, *B.subtilis*, and *S.aureus*. The lowest minimum bactericidal concentrations taken were 50 mg/ml which showed against *P.aeruginosa*. The toxicity test also tested on *Artemia salina* and resulted that the LC₅₀ value which is 3.16 mg/ml as compared to 1.0 mg/ml, thus the extract is not toxic.