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**A PRELIMINARY STUDIES ON PHYTOCHEMICALS AND ANTIMICROBIAL
POTENTIAL OF *Coriandrum sativum* L AGAINST PATHOGENIC
MICROORGANISMS**

By

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DECLARATION

I hereby declare that this thesis is my original work and has not been submitted previously or currently for any other degree at UiTM or any other institutions.

(Nur Diyanah Binti Hazmi)

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ABSTRACTS

Background: Coriander (*Coriandrum sativum*) belongs to the *Apiaceae* family. It has been claimed to have antibacterial activity against Gram-positive and Gram-negative as well as fungi. This has led to studying of phytochemical properties of *Coriandrum sativum* L aerial parts as an antimicrobial activity against pathogenic microorganisms extracted by adding hexane as an additional steps for cleaning purpose and comparing the effectiveness as mentioned in previous study. **Method:** The plants of *Coriandrum Sativum* were purchased from local market in Selangor. The aerial parts were collected and washed with distilled water and dried in the hot air oven for 2 days, then made to powder form. The powdered samples with concentration (100g/500ml) was placed in 2 solvents which are methanol and hexane. As for hexane, the powder was soaked in 24 hours before being extracted by using methanol for the next day for 2 days. The extract from these solvents were soaked and evaporated under pressure by using rotary evaporator with the final concentration 1000mg/ml. Preliminary phytochemical screening and antimicrobial sensitivity testing (AST) were performed against pathogenic organism and compared the effectiveness. **Results:** The results of antimicrobial assay showed that methanolic extract of *Coriandrum sativum* L exhibited most antimicrobial activity against *Escherichia coli*, *Pseudomonas aeruginosa*, and *Proteus mirabilis* respectively. While for hexane-washed methanolic extract of *Coriandrum sativum* L have marked antibacterial activity against *Bacillus cereus*, *Proteus mirabilis* and *Staphylococcus aureus*. None of the extract exhibited antimicrobial activity against *Acinetobacter baumannii*. Comparison between methanolic extract and hexane-washed methanolic extract show significant result at same concentration. **Conclusion:** In conclusion, the leaves extract of *Coriandrum sativum* plant have marked antibacterial activity against many bacteria. From this study, it can be said that, additional steps by adding hexane as lipid removing purpose of *Coriandrum sativum* shows no significance changes. Nevertheless, both extractions showed a wide range of antibacterial activity and can be used for the medical purpose. **Keywords:** *Coriandrum sativum*, antimicrobial, phytochemical, extraction, lipid, hexane, methanol, pathogenic bacteria.