

**EVALUATION OF ANTIOXIDANTS AND ANTIMICROBIAL
POTENCY OF LEAVES OF *ENTADA SPIRALIS***

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**Final Year Project Submitted in
Partial Fulfilment of the Requirements for the
Degree of Bachelor of Science (Hons.) Chemistry
in the Faculty of Applied Sciences
Universiti Teknologi MARA**

JANUARY 2019

ABSTRACT

EVALUATION OF ANTIOXIDANTS AND ANTIMICROBIAL POTENCY OF LEAVES OF *ENTADA* *SPIRALIS*

Entada spiralis also known as 'Akar sintok' which is from *Leguminosea* family was used in this research to determine the antioxidant and antimicrobial properties. This herbs plant was traditionally well known due the effectiveness to treat disease and as health care. Generally, antioxidant is a valued substance needs by organisms to trap the free radicals and avoid the aging process. Antimicrobial or also known as antibiotics is an agent that can reduce and destroy the activity of microorganisms such as fungi and bacteria. In determining these two properties, several methods were conducted. The leaves of *Espiralis* was extracted using three different polarity of solvents such as petroleum ether, dichloromethane and ethyl acetate. The phytochemical screening on TLC with spraying reagent, dot blot assay, UV and FTIR analysis was used as the method to determine the antioxidant activity. The antimicrobial activity was determined by disc diffusion method. The antioxidant properties were determined since the TLC plate shows the positive result may due the presence of terpenoid compound. Besides, the purple color of DPPH was immediately reducing to yellow spot during dot blot assay. The extract also shows the antioxidant activity since it able to scavenge free radical of DPPH at low concentration. The inhibition zone appeared on inoculated agar plate indicated that the extract was active against the *Erwinia Chysenthermi*. The extract has both properties of antioxidant and antimicrobial properties. Among all extracts, the PE is the strongest extract to exhibit antioxidant while DCM extract is the best to exhibit antimicrobial properties.

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