INVESTIGATION OF ANTIOXIDATIVE CONSTITUENTS FROM THE STEM OF *ENTADA SPIRALIS*

NORSHAZLEEN BINTI MOHD AZENAN

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

JANUARY 2017

ABSTRACT

This study is about the determination of antioxidant activity in the stem of *E. spiralis*. Phytochemical screening test was performed by using the methanol extraction. Then, the methanol extract was proceed to determine the functional group using FTIR. Thin Layer Chromatographic (TLC) Analysis was developed to identify the compound that presence in the stem of *E. spiralis*. Each TLC was sprayed by using spraying reagent to identify compound that contains in each extract. After the extraction of methanol, dichloromethane, and petroleum ether was done, the best solvent system was used to developed TLC analysis. The best solvent system for MeOH extraction is 27:3 (HEX:EA), DCM extraction is 29.4:0.6 (DCM:MeOH), and PE extraction is 24:6 (Chloroform:Acetone). Then, serial dilution was conducted to investigate the antioxidative assay in the stem of *E. spiralis* and also identify IC_{50}. Methanol extract has the highest antioxidant activity. Isolation of antioxidative compound from PE extract from different Rf then proceed with GC-MS analysis. Oxiraneoctanoic acid, 3-octyl-, cis, 9,12-Octadecadienoic acid, Hexadecanoic acid, 1-(hydroxymethyl)-1,2-ethanediyl ester, Butylaldehyde, 4-benzyloxy-4-[2,2,-dimethyl-4-dioxolanyl], Butylaldehyde, 4-benzyloxy-4-[2,2,-dimethyl-4-dioxolanyl], Hexadecanoic acid, methyl ester, 1H-Indene, 1-methylene, Benzene, 1,2,4,5-tetramethyl, and trans-Verbenyl isovalerate have been isolated and identified by GC-MS.

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