FRACTIONATION OF METHANOL EXTRACT FROM THE STEM OF *ENTADA SPIRALIS* RIDL USING VACUUM LIQUID CHROMATOGRAPHY AND ITS PRELIMINARY PHYTOCHEMICAL INVESTIGATION OF ACTIVE COMPONENTS

MUHAMMAD QUSYAIRI BIN JORI ROSLAN

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ABSTRACT

FRACTIONATION OF METHANOL EXTRACT FROM THE STEM OF *ENTADA SPIRALIS* RIDL USING VACUUM LIQUID CHROMATOGRAPHY AND ITS PRELIMINARY PHYTOCHEMICAL INVESTIGATION OF ACTIVE COMPONENTS

The scope of study was focused on fractionation of methanol (MeOH) extract from the stem of *E.spiralis* using Vacuum Liquid Chromatography (VLC) technique to determine the active fraction using disc diffusion method and to screen phytochemical compounds from methanol fractions using thin layer chromatography (TLC). The present of phytocontituents compounds were detected by using Fourier Transforms Infrared Spectroscopy (FTIR) such as saponin, terpenoid and steroid. The study showed that the phytoconstituents present in the stem of *E.spiralis* which makes it remarkable for its use and phytoconstituents was evaluated against Gram – positive bacteria such as *staphylococcus aureus* and *staphylococcus epidermis* by using disk diffusion assay. Phytocontituents were determined at three different fractions with different solvents dichloromethane (DCM) to methanol (MeOH) ratio and fractionations were namely as F1, F2 and F3 with binary system 9: 1;(DCM: MeOH) 5: 5;(DCM: MeOH) and 3: 7;(DCM: MeOH) respectively. Phytochemical screening of all fractions showed presence of terpenoids, steroids and saponin while phenolics and flavanoids were absence. The antibacterial activity of all fractions of stems extraction of *E.spiralis* was determined by agar well diffusion method at concentration 400mg/ml using Gram – positive *staphylococcus aureus* and *staphylococcus epidermis.* F2 and F3 showed susceptibility against selected bacteria and F2 was inhibited *staphylococcus epidermis* growth with inhibition zone 11.3 mm while F3 was found the most fraction active toward *staphylococcus aureus* with inhibition zone 11.5 mm. These studies showed that fractionation of stems methanol extracts of *E.spiralis* inhibited the growth of microorganisms in polarity dependently. The fractionations of stems have phytochemical constituents who possess the antimicrobial activity. The data was demonstrated as the preliminary antimicrobial properties of the stems of *E.spiralis* as new antimicrobial is necessitated in face of the increased resistance of infectious microorganisms to antimicrobial.