ANTIMICROBIAL AND ANTIOXIDANT EFFECT ON THE ESSENTIAL OIL FROM *PITHECELLOBIUM JIRINGA*

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ABSTRACT

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The aim of this study was to investigate the antimicrobial and antioxidant effect on the essential oil from *P. jiringa*. The study take part on the leaves and twigs of *P.jiringa*. The properties of *P.jiringa* were discovered and observed with several tests and analysis. The study on phytochemical screening of *P.jiringa* leaves, revealed the presence of secondary metabolites such as alkaloids, flavonoids, phenolics, terpenoids and saponins that indicating the potential of plant as traditional medicines. These chemical constituents also found on TLC after spraying wih Vanillin/H_2SO_4 reagent, $FeCl_3$ reagent, Dragendorff's reagent, boric and oxalic acid reagent, visualize under UV (254 nm) and UV (366 nm) that indicated different chemical compounds. The antimicrobial properties which involving antibacterial and antifungal were determined by using disc diffusion method with different concentrations of solvent extractions against a gram-positive bacterial strains: *S. aureus* and fungi yeast *C. albicans.* These microorganisms have potential to cause some diseases such as pneumonia, catheter infections and yeast infection in the vagina. The result showed that both essential oil extracts of *P.jiringa* leaves and twigs does not inhibit the microbial growth of *S.aureus* and *C.albicans*. The antioxidant activity of both *P.jiringa* leaves and twigs had given positive result through qualitative method analysis using DPPH reagent. Thus, this *P.jiringa* might be potential to be antioxidant agent.

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