



Comparison of Antibacterial Activity of Ethanolic Extract from Immature and Mature Nipa Leaves (*Nypa fruticans*, Wurmb) against *Staphylococcus aureus* and *Escherichia coli*

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Abstract : Background: Nipa (*Nypa fruticans*, Wurmb) is a species of Arecaceae, has been used to treat stomach ache, diabetes mellitus and febrifuge traditionally and give satisfactory results.

Objective: The aim of this research was intended to know the antibacterial activity of ethanolic extract of immature and mature Nipa leaves against *Staphylococcus aureus* and *Escherichia coli*.

Methods: Simplex were characterized, phytochemical screening and extracted by a maceration method using ethanol 96% as solvent. An ethanolic extract of immature and mature Nipa leaves was tested the antibacterial activity against *Staphylococcus aureus* and *Escherichia coli* which was conducted with in vitro agar diffusion method using the paper disk.

Results: The characterization of simplex of immature and mature Nipa leaves (*Nypa fruticans*, Wurmb) obtained water content respectively 5.64% and 5.81%. The content of water soluble respectively 19,27% and 22.30%. Content of ethanol soluble respectively 16.32% and 18.05%. Total ash content, respectively 6.36% and 6.49%. Content of acid insoluble ash, respectively 1.58% and 1.61%. Phytochemical screening of simplex and ethanolic extract immature and mature Nipa leaves showed the presence of steroids/triterpenoids, flavonoid, glycosides, saponins and tannins. The result of antibacterial activity of ethanolic extract of immature and mature Nipa leaves can inhibit the growth of the bacteria *Staphylococcus aureus* at concentration 100 mg/mL; 75mg/mL with the effective diameter of the inhibition area respectively 14,27 mm and 14,10 mm; bacteria *Escherichia coli* at the same concentration 75 mg/mL, with the effective diameter of the inhibition area respectively 14,10 mm and 14,80 mm.

Conclusion: Based on the results, ethanolic extract of mature Nipa leaves are more effective to inhibit the growth of the bacteria *Staphylococcus aureus* and *Escherichia coli* than the ethanolic extract of immature Nipa leaves.

Key words : *Nipa leaves, ethanolic extract, antibacterial, Staphylococcus aureus, Escherichia coli.*