

**ANTIMICROBIAL INVESTIGATION OF *Annona muricata*
(SOURSOP) LEAVES AGAINST BACTERIA CAUSING
SKIN INFECTION**

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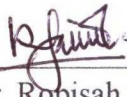
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This Final Year Project Report entitled “**Antimicrobial Investigation on *Annona Muricata* (Soursop) Leaves Against Bacterial Causing Skin Infection, Kuala Pilah**” was submitted by Sarah Afiqah binti Yahaya, in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by



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ABSTRACT

ANTIMICROBIAL INVESTIGATION OF *Annona muricata* (SOURSOP) LEAVES AGAINST BACTERIA CAUSING SKIN INFECTION

SSTI is the skin infection caused by pathogenic bacteria that infect skin layers and underlying soft tissues. This study is done to identify the phytochemical substance in extract and fraction of *A. muricata* leaves and to determine the antimicrobial activity of the leaves. *A. muricata* leaves was extracted by using cold maceration technique with three different polarity of solvent which are methanol, ethyl acetate and hexane. The test on phytochemical screening was done to determine the presence of alkaloid, flavonoid, tannin, saponin and phenol in *A. muricata* leaves extract. The antibacterial activity of crude extract was tested against four pathogenic bacteria which are *Escherichia coli*, *Staphylococcus aureus*, *Salmonella typhi* and *Pseudomonas aeruginosa* by using disc diffusion method. Finally, *A. muricata* methanol extract shows the best antibacterial against all four pathogenic bacteria was tested by using MIC method. Methanol extract have the highest percentage yield extraction with 3.01 % compared to ethyl acetate and hexane extract. Phytochemical analysis, methanol extract showed the presence of alkaloid and flavonoid. Meanwhile, ethyl acetate extract showed the presence of tannin, saponin and phenolic while, hexane showed a presence of tannin and phenolic. Methanol extract is the most effective against *E. coli*. Lastly, MIC test of methanol extracts showed that methanol extract exhibit minimum inhibition concentration in inhibiting *E. coli* with MIC value of 75 mg/ml. As a conclusion, this study showed that *A. muricata* contains several important phytochemicals and has a great potential as active antibacterial agents. Further study regarding methanol extracts of *A. muricata* leaves is recommended to determine the identity of the antibacterial compound from the leaves of *A. muricata* and also to determine their full spectrum of efficacy.