

Antibacterial Activity of Flavonoids from Corn Silk (*Zea mays* L.) in *Propionibacterium acne*, *Staphylococcus Aureus* and *Staphylococcus Epidermidis*

Authors : Fitri Ayu, Nadia, Tanti, Putri, Fatkhan, Pasid Harlisa, Suparmi

Abstract : Acne is a skin abnormal conditions experienced by many teens, this is caused by various factors such as the climate is hot, humid and excessive sun exposure can aggravate acne because it will lead to excess oil production. Flavonoids form complex compounds against extracellular proteins that disrupt the integrity of bacterial cell membrane in a way denature bacterial cell proteins and bacterial cell membrane damage. This study aimed to test the antibacterial activity of corn silk extract with a concentration of 10 %, 20 %, 30 %, 40 %, 50 %, 60 %, 70 %, 80 %, 90 % and 100 % in vitro by measuring the inhibition of the growth of bacteria *Propionibacterium acne*, *Staphylococcus aureus* and *Staphylococcus epidermis* then compared with the standard antibiotic clindamycin. Extracts tested by Disk Diffusion Method, in which the blank disc soaked with their respective corn silk extract concentration for 15-30 minutes and then the medium of bacteria that have been planted with *Propionibacterium acne*, *Staphylococcus aureus* and *Staphylococcus epidermis* in the given disk that already contains extracts with various concentration. Incubated for 24 hours and then measured the growth inhibition zone *Propionibacterium acne*, *Staphylococcus aureus* and *Staphylococcus epidermidis*. Corn silk contains flavonoids, is shown by the test of flavonoids in corn silk extract by using a tube heating and without heating. Flavonoid in corn silk potentially as anti acne by inhibiting the growth of bacteria that cause acne. Corn silk extract concentration which has the highest antibacterial activity is then performed in a cream formulation and evaluation test of physical and chemical properties of the resulting cream preparation.

Keywords : antibacterial, flavonoid, corn silk, acne

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