

AKTIVITAS ANTIBIOFILM PROPOLIS LEBAH MADU TERHADAP BAKTERI Pseudomonas aeruginosa

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Accreditation	5
Abstract	<p>Background: The number deaths of the infection effect from the bacterium Pseudomonas aeruginosa reaches 50% depending on the type of infection. The P.aeruginosa can be found in various environments, one of which is the hospital, with an incidence around 10-15%. P.aeruginosa is one of the bacteria that is difficult to treat because of its ability to form biofilm. Propolis is a natural resin containing flavonoid, fenol and terpenoid which used as antibiofilm. This study aims to examine the antibiofilm activity of propolis in inhibiting the formation of P. aeruginosa biofilm. Methods: This study is an in vitro laboratory experimental with a post-test only control group design. The number of samples was determined by the federer formula, where the samples in this study were 4 per groups. The propolis dissolved using aquades with the result the concentration became 12.5%, 6.25%, 3.125%, 1.56%, 0.78%. The proces of of inhibition of biofilm formation was measured using a microtiter plate assay with a wavelength of 620 nm. Results: Propolis can inhibit biofilm formation by 19.67% at a concentration of 0.78%. However, the proces cannot inhibit biofilm formation at other high concentrations because of the high viscosity of propolis, and the presence of other propolis ingredients which may be able to initiate biofilm formation. Conclusion: Propolis has antibiofilm activity against P.aeruginosa bacteria at a concentration of 0.78%.</p>
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