

Efek antibakteri ekstrak daun sukun terhadap viabilitas biofilm Streptococcus mutans ATCC 25175 : in vitro = The antibacterial effect of breadfruit leaf's extract on viability of biofilm of Streptococcus mutans ATCC 25175 : in vitro

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Abstrak

Daun Sukun memiliki efek antibakteri. S.mutans berperan dalam pembentukan biofilm. Penelitian ini bertujuan menganalisis potensi ekstrak daun Sukun terhadap viabilitas S.mutans secara in vitro. S.mutans ATCC 25175 dikultur, diinkubasi 20 jam (fase akumulasi) dan 24 jam (fase maturasi), kemudian dipaparkan ekstrak Daun Sukun 5;10;20;40;80;100%. Uji viabilitas menggunakan MTT assay, dianalisis dengan one-way ANOVA. Terdapat penurunan bermakna viabilitas S.mutans fase 20 jam setelah pemaparan ekstrak daun Sukun pada semua konsentrasi, dan fase 24 jam hanya konsentrasi 5% terjadi peningkatan bermakna dibandingkan kelompok kontrol ($p < 0.05$). Viabilitas biofilm S.mutans pada kelompok perlakuan fase 20 jam lebih rendah dibandingkan fase 24 jam.

.....Breadfruit leaf's has an antibacterial property. S.mutans has a function to form biofilm. The purpose of this study was to analyze the potential of breadfruit leaf's extract toward the viability of S.mutans in vitro. S.mutans ATCC 25175 were cultured and incubated for 20 hours (accumulation phase) and 24 hours (maturation phase). Then added with the following breadfruit leaf's concentration :5;10;20;40;80;100%. The viability test was using MTT assay and would be analyzed by one-way ANOVA. There was significant decreased of the viability biofilm S.mutans on 20 hours phase after had been added the various concentration of bread fruit leaf's extract, and on 24 hours phase only concentration 5% viability had increased significantly compared to the control group ($p < 0.05$). The Viability biofilm S.mutans on 20 hours phase for all treatment group was lower than 24 hours phase.