

Efek antibakteri ekstrak daun Sukun terhadap viabilitas biofilm *Streptococcus sanguinis* ATCC 10556 : in vitro = The antibacterial effect of breadfruit leaf's extract on viability of biofilm of *Streptococcus sanguinis* ATCC 10556 : in vitro

Vaza Nadia Zairinal, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20331113&lokasi=lokal>

Abstrak

Ekstrak daun sukun memiliki efek antibakteri. *S. sanguinis* diketahui sebagai bakteri yang berperan pada pembentukan awal plak. Penelitian ini bertujuan untuk menganalisis potensi antibakteri ekstrak daun sukun terhadap viabilitas biofilm *S. sanguinis* secara in vitro. Bakteri *S. sanguinis* ATCC 10556 dikultur pada 96-well plate dan diinkubasi 37°C selama 20 jam (fase akumulasi) dan 24 jam (fase maturasi) kemudian dipaparkan ekstrak daun sukun dengan konsentrasi 5; 10; 15; 20; 40; 80; dan 100%. Viabilitas biofilm *S. sanguinis* diuji menggunakan MTT assay dengan panjang gelombang 490 nm. Hasil dianalisis dengan one-way ANOVA. Hasil penelitian ini menunjukkan bahwa terdapat penurunan bermakna viabilitas *S. sanguinis* setelah pemaparan dengan ekstrak daun sukun pelbagai konsentrasi pada fase akumulasi dan fase maturasi dibandingkan dengan kelompok kontrol ($p < 0.05$). Viabilitas *S. sanguinis* setelah pemaparan ekstrak daun sukun konsentrasi 20; 80; dan 100% pada fase akumulasi lebih rendah dibandingkan fase maturasi.

<hr>

Breadfruit leaf's extract has a function as antibacterial. *S. sanguinis* is known as an early agent of formation of bacterial plaque. This research had purpose to analyze the antibacterial effect of breadfruit leaf's extract against *S. sanguinis* growth. *S. sanguinis* ATCC 10556 were cultured in 96-well plate and incubated for 20 hours (accumulation phase) at 37 and 24 hours (maturation phase) then added breadfruit leaf's extract concentrations 5; 10; 20; 40; 80; and 100%. Viability test was using MTT assay with wavelength of 490 nm. The results were analyzed by one-way ANOVA. The results showed that the viability of *S. sanguinis* after breadfruit leaf's extract exposed in all concentrations on accumulation and maturation phase was lower than the control group ($p < 0.05$). The viability of *S. sanguinis* after added breadfruit leaf's extract concentration 20; 80; and 100% on accumulation phase was lower than maturation phase.