

Pengaruh ekstrak kulit batang delonix regia terhadap pertumbuhan bakteri salmonella secara in vitro = Effect of delonix regia bark extract on the growth of salmonella in vitro

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20421327&lokasi=lokal>

Abstrak

[Penyakit menular masih menjadi masalah kesehatan yang serius di Indonesia. Salah satu penyakit menular adalah demam tifoid akibat infeksi *Salmonella typhi* atau *Salmonella paratyphi*. Pengobatan demam tifoid menggunakan siprofloksasin sebagai lini pertama. Sudah banyak antibiotik yang mengalami resistensi seperti, kloramfenikol, ampisilin, dan amoksisilin. Ekstrak *Delonix regia* sudah diketahui memiliki efek antibakteri terhadap *Salmonella typhi*. Penelitian ini merupakan penelitian eksperimental menggunakan ekstrak kulit batang *Delonix regia*. Ekstraksinya menggunakan pelarut etanol. Peneliti membuat empat konsentrasi yang berbeda yaitu 8 mg/mL, 16 mg/mL, 32 mg/mL, dan 64 mg/mL. Kemudian setiap konsentrasi dilakukan uji in vitro dengan metode difusi cakram dengan seftriakson sebagai kontrol positif dan akuades sebagai kontrol negatif. Zona hambat yang terbentuk kemudian diukur menggunakan jangka sorong. Hasil penelitian ini menunjukkan ke empat dosis ekstrak kulit batang *Delonix regia* tidak terdapat zona hambat terhadap bakteri *Salmonella typhi*, sedangkan seftriakson mampu menghambat pertumbuhan bakteri dengan mean diameter zona hambat sebesar 30,6 mm 1,2 mm. Faktor yang mungkin dapat memengaruhi ialah, metode penelitian yang dipilih yaitu difusi cakram, konsentrasi ekstrak, dan etanol sebagai pelarut ekstrak. Selain itu kemungkinan lain adalah pada proses mengekstrak *Delonix regia* dan pemilihan tumbuhan *Delonix regia*.; Infectious disease remains a serious health problem in Indonesia. One infectious disease is typhoid fever due to infection with *Salmonella typhi* or *Salmonella paratyphi*. First-line of treatment typhoid fever is ciprofloxacin. Already a lot of antibiotic resistant inflicted, such as chloramphenicol, ampicillin and amoxicillin. *Delonix regia* extract has been known to have antibacterial effects against *Salmonella typhi*. This study was experimental research study using bark extract *Delonix regia* conducted phytochemical screening test. *Delonix regia* bark extract with ethanol solvent. Four concentrations has been made: 8 mg / mL, 16 mg / mL, 32 mg / mL, and 64 mg / mL. Then, each concentration extract was tested in vitro by disc diffusion method and compared to ceftriaxone as a positive control and distilled water as a negative control. Inhibition zone measured using the calliper. The results showed a fourth dose of the extract of the bark of *Delonix regia* there is no zoned of inhibition against the bacteria *Salmonella typhi*, while ceftriaxone as a positive control to inhibit the growth of bacteria with an mean diameter of 30.6 mm 1.2 mm inhibition zone. Factors that might affect is the research method chosen as a disc diffusion, the concentration of the extract, and ethanol as a solvent extract. Additionally another possibility is the process of extracting *Delonix regia* and selected plant *Delonix regia*., Infectious disease remains a serious health problem in Indonesia. One infectious disease is typhoid fever due to infection with *Salmonella typhi* or *Salmonella paratyphi*. First-line of treatment typhoid fever is ciprofloxacin. Already a lot of antibiotic resistant inflicted, such as chloramphenicol, ampicillin and amoxicillin. *Delonix regia* extract has been known to have antibacterial effects against *Salmonella typhi*. This study was experimental research study using bark extract *Delonix regia* conducted phytochemical screening test. *Delonix regia* bark extract with ethanol solvent. Four concentrations has been made: 8 mg / mL, 16 mg / mL, 32 mg / mL, and

64 mg / mL. Then, each concentration extract was tested in vitro by disc diffusion method and compared to ceftriaxone as a positive control and distilled water as a negative control. Inhibition zone measured using the calliper. The results showed a fourth dose of the extract of the bark of *Delonix regia* there is no zoned of inhibition against the bacteria *Salmonella typhi*, while ceftriaxone as a positive control to inhibit the growth of bacteria with an mean diameter of 30.6 mm 1.2 mm inhibition zone. Factors that might affect is the research method chosen as a disc diffusion, the concentration of the extract, and ethanol as a solvent extract. Additionally another possibility is the process of extracting *Delonix regia* and selected plant *Delonix regia*.]