



ELECTRONIC THESIS AND DISSERTATION UNSYIAH

TITLE

UJI AKTIVITAS ANTIBAKTERI EKSTRAK N-HEKSAN, ETIL ASETAT DAN METANOL DAUN BELUNTAS (*PLUCHEA INDICA L.*) TERHADAP PERTUMBUHAN BAKTERI *STAPHYLOCOCCUS EPIDERMIDIS*

ABSTRACT

ABSTRAK

Beluntas merupakan salah satu tumbuhan yang telah dimanfaatkan secara luas oleh masyarakat baik sebagai bahan obat maupun bahan makanan. Uji aktivitas antibakteri ekstrak n-heksan, etil asetat, dan metanol daun beluntas (*Pluchea indica*) terhadap bakteri *Staphylococcus epidermidis* telah dilakukan untuk mengetahui aktivitas antibakteri dari masing-masing ekstrak daun beluntas terhadap bakteri tersebut. Terhadap ekstrak n-heksan, etil asetat dan metanol daun beluntas juga dilakukan skrining fitokimia dan karakterisasi. Hasil skrining fitokimia menunjukkan bahwa ekstrak n-heksan daun beluntas mengandung senyawa steroid. Ekstrak etil asetat mengandung senyawa saponin, tanin dan steroid. Sedangkan ekstrak metanol daun beluntas mengandung senyawa alkaloid, saponin, tanin, dan triterpenoid. Hasil karakterisasi ekstrak n-heksan, etil asetat dan metanol secara berturut-turut meliputi kadar air ekstrak sebesar 19%; 18,7% dan 17,37%, kadar sari larut air ekstrak sebesar 1,98%; 15,22% dan 27,51%, kadar sari larut etanol 12,86%; 43,54% dan 21,53%, kadar abu total 2,60%; 1,13% dan 2,06%. Uji aktivitas antibakteri terhadap ekstrak daun beluntas menggunakan metode difusi cakram (Kirby-Bauer) dengan variasi konsentrasi ekstrak yaitu 12,5; 25 dan 50%. Hasil uji aktivitas antibakteri menunjukkan bahwa ekstrak n-heksan daun beluntas tidak memiliki aktivitas antibakteri terhadap bakteri *S. epidermidis*. Ekstrak etil asetat daun beluntas pada konsentrasi 12,5% tidak memiliki aktivitas antibakteri sedangkan pada 25 dan 50% memiliki aktivitas antibakteri dengan diameter zona hambat berturut-turut yaitu 6,32 dan 8,46 mm. Sedangkan, ekstrak metanol daun beluntas pada konsentrasi 12,5; 25 dan 50% memiliki aktivitas antibakteri dengan diameter zona hambat berturut-turut adalah 9,52; 11,15 dan 12,57 mm. Berdasarkan diameter zona hambat yang terbentuk, ekstrak metanol daun beluntas memiliki aktivitas antibakteri yang paling baik terhadap bakteri *Staphylococcus epidermidis*.

Kata kunci: Daun beluntas (*Pluchea indica*), *S. epidermidis*, metode Kirby Bauer.

ABSTRACT

Marsh fleabane (*Pluchea indica L.*) has been widely used by the community as the medicine and foodstuff. Antibacterial activity of n-hexane, ethyl acetate, and methanol extract of *Pluchea indica* against *Staphylococcus epidermidis* have been conducted to determine the antibacterial activity of each extract to inhibit the growth of *S. epidermidis*. The phytochemical screening and characterization of extract also evaluated. Phytochemical screening results showed that the n-hexane extract contains only steroid compound. While, ethyl acetate extract contains saponin, tannin and steroid. Methanol extracts contains alkaloid, saponin, tanin, and triterpenoid compounds. The extract characterization result showed that water content of n-hexane, ethyl acetate and methanol extract was 19; 18.7 and 17.37%; water soluble of n-hexane, ethyl acetate and methanol extract was 1.98; 15.22 and 27.51%, ethanol soluble of n-hexane, ethyl acetate and methanol extract was 12.86%; 43.54 and 21.53. Total ashes of n-hexane, ethyl acetate and methanol extract were 2.60%; 1.13 and 2.06. The antibacterial activities of the extracts were determined using Kirby-Bauer disc diffusion method with various concentration of extracts were 12.5; 25 and 50%. The results showed that, n-hexane extract did not have any antibacterial activities against *S. epidermidis* in all concentrations tested. Meanwhile, ethyl acetate extract at concentrations 12.5 didn't have any antibacterial activities but at concentrations 25 and 50% showed the antibacterial activities with diameter of inhibition zone were 6.32 and 8.46 mm. Methanol extract at concentrations 12.5, 25 and 50% also have antibacterial activities with diameter of inhibition zone were 9.52; 11.15 and 12.57 mm. Based on the diameters of inhibition zone, we can conclude that methanol extract of *Pluchea indica* showed the biggest antibacterial activities against *S. epidermidis*.

Keywords: *Pluchea indica*, *S. epidermidis*, Kirby-Bauer disc diffusion method.