

INTISARI

SURYANI, 2018 Uji Aktivitas Antibakteri Fraksi n-Heksan, Etil Asetat, dan Air dari Ekstrak Daun Singkong (*Manihot esculenta* Crantz) terhadap *Escherichia coli* ATCC 25922, Skripsi, Fakultas Farmasi, Universitas Setia Budi, Surakarta.

Daun singkong (*Manihot esculenta* Crantz) mengandung senyawa flavonoid, saponin, dan tannin yang digunakan sebagai antibakteri. Penelitian ini bertujuan untuk mengetahui aktivitas antibakteri fraksi *n*-heksan, etil asetat, dan air dari ekstrak etanol daun singkong (*Manihot esculenta* Crantz) terhadap bakteri *Escherichia coli* ATCC 25922 dan untuk mengetahui nilai Konsentrasi Hambat Minimum (KHM) dan Konsentrasi Bunuh Minimum (KBM) fraksi paling aktif dari daun singkong (*Manihot esculenta* Crantz) terhadap *Escherichia coli* ATCC 25922.

Daun singkong diekstraksi dengan metode maserasi menggunakan pelarut etanol 70%. Ekstrak yang diperoleh difraksinasi dengan pelarut *n*-heksan, etil asetat, dan air. Pengujian aktivitas antibakteri menggunakan metode difusi dengan konsentrasi 50%, 25%, 12,5% dan metode dilusi dengan konsentrasi 50%; 25%; 12,5%; 6,25%; 3,12%; 1,56%; 0,78%; 0,39%; 0,19%; 0,09%.

Hasil penelitian menunjukkan fraksi *n*-heksan, etil asetat, dan air dari ekstrak etanol daun singkong mempunyai aktivitas antibakteri terhadap bakteri *Escherichia coli* ATCC 25922. Fraksi etil asetat merupakan fraksi paling aktif yaitu pada konsentrasi 50% dengan rata-rata diameter zona hambat 19,66 mm. Hasil dilusi menunjukkan nilai Konsentrasi Bunuh Minimum 12,5%.

Kata kunci : Daun singkong (*Manihot esculenta* Crantz), *Escherichia coli* ATCC 25922, fraksi *n*-heksan, fraksi etil asetat, fraksi air, antibakteri

ABSTRACT

SURYANI, 2018, ANTIBACTERIAL ACTIVITY TEST OF n-HEXANE FRACTION, ETHYL ACETATE, AND WATER FROM ETHANOL EXTRACT OF CASSAVA LEAVES (*Manihot esculenta* Crantz) AGAINST *Escherichia coli* ATCC 25922, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Cassava leaves (*Manihot esculenta* Crantz) contains flavonoid, saponins, and tannins which is used as an antibacterials. The aim of this research is to know the antibacterial activity of n-hexane fraction, ethyl acetate, and water from ethanol extract of cassava leaves (*Manihot esculenta* Crantz) against *Escherichia coli* ATCC 25922 bacteria and to know the value of Minimum Inhibitor Concentration (MIC) and Minimum Bactericidal Concentration (MBC) the most active fraction of cassava leaves (*Manihot esculenta* Crantz) against *Escherichia coli* ATCC 25922.

Cassava leaves were extracted by maceration method using 70% ethanol solvent. The extract obtained was fractionated with n-hexane, ethyl acetate, and water solvents. Testing of antibacterial activity using diffusion method with concentration 50%, 25%, 12,5% and dilution method with concentration 50%; 25%; 12.5%; 6.25%; 3.12%; 1.56%; 0.78%; 0.39%; 0.19%; 0.09%.

The results showed that the fraction of n-hexane, ethyl acetate, and water from ethanol extract of cassava leaves had antibacterial activity against *Escherichia coli* ATCC 25922 bacteria. Ethyl acetate fraction is the most active fraction that is at concentration 50% with mean inhibitory zone diameter 19,66 mm. The dilution results show the value of Minimum Bactericidal Concentration (MBC) is 12.5%.

Keywords: Cassava leaves (*Manihot esculenta* Crantz), *Escherichia coli* ATCC 25922, n-hexane fraction, ethyl acetate fraction, water fraction, antibacterial