

INTISARI

MANEAK, I.E., 2018, UJI AKTIVITAS ANTIBAKTERI EKSTRAK ETANOL DAN FRAKSI *n*-HEKSANA, ETIL ASETAT, SERTA AIR DARI DAUN JAMBU AIR (*Syzygium aqueum*) TERHADAP PERTUMBUHAN *Escherichia coli* ATCC 25922, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Daun jambu air (*Syzygium aqueum*) dari family Myrtaceae merupakan tanaman yang telah banyak digunakan masyarakat dalam bidang pengobatan. Daun jambu air mengandung senyawa flavonoid, fenolik dan tanin. Penelitian ini bertujuan untuk mengetahui aktivitas antibakteri ekstrak etanol, fraksi *n*-heksana, etil asetat serta air dari daun jambu air dan untuk mengetahui Konsentrasi Hambat Minimum (KHM) dan Konsentrasi Bunuh Minimum (KBM) fraksi teraktif dari daun jambu air terhadap pertumbuhan *Escherichia coli* ATCC 25922 .

Daun jambu air diekstraksi secara maserasi dengan pelarut etanol 70%, kemudian difraksinasi dengan pelarut *n*-heksana, etil asetat dan air. Ekstrak etanol 70%, fraksi *n*-heksana, etil asetat dan air diuji aktivitas antibakteri menggunakan metode difusi disk dengan beberapa konsentrasi. Fraksi teraktif yang didapat dari metode difusi kemudian dilanjutkan dengan metode dilusi dengan konsentrasi 50%, 25%, 12,5%, 6,25%, 3,12%, 1,56%, 0,78%, 0,39%, 0,19% dan 0,095%.

Hasil pengujian aktivitas antibakteri dari ekstrak etanol 70%, fraksi *n*-heksana, etil asetat dan air dengan metode difusi menunjukkan adanya daya hambat dengan adanya daerah jernih disekitar disk. Diameter hambat rata-rata yang paling besar adalah fraksi etil asetat dengan rata-rata 28 mm pada konsentrasi 50%. Fraksi etil asetat dari daun jambu air mempunyai aktivitas antibakteri yang paling aktif dibandingkan ekstrak etanol 70%, fraksi *n*-heksana, dan air. Hasil penelitian dengan metode dilusi menunjukkan bahwa Konsentrasi Bunuh Minimum fraksi etil asetat adalah 12,5%.

Kata kunci : *Syzygium aqueum*, *Escherichia coli* ATCC 25922, difusi, dilusi.

ABSTRACT

IRENE, I. E., 2018, ANTIBACTERIA ACTIVITY TEST OF ETHANOL EXTRACT, AND FRACTION OF *n*-HEXANE, ETHYL ACETATE AND WATER FROM GUAVA LEAVES (*Syzygium aqueum*) AGAINST THE GROWTH OF *Escherichia coli* ATCC 25922, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Syzygium aqueum the family of Myrtaceae is a plant that has been widely used by the public in the field of medicine. *Guava* leaves (*Syzygium aqueum*) contain flavonoid, fenolik and tanin. The aim of the experiment was to determine the antibacteria activity of ethanol extract, fraction of *n*-hexane, ethyl acetate and water from guava leaves and to know Minimum Inhibition Concentration (MIC) and Minimum Bactericide Concentration (MBC) active fraction from guava leaves against the growth of *Escherichia coli* ATCC 25922.

Guava leaves extracted by maceration with 70% ethanol, then fractionated with *n*-hexane, ethyl acetate, and water solvent. After that, tested for antibacteria activity using disk diffusion method with multiple concentrations. The most active fraction obtained from the diffusion method is then followed by the dilution method with concentrations of 50%, 25%, 12,5%, 6,25%, 3,12%, 1,56%, 0,78%, 0,39%, 0,19% and 0,095%.

The result of antibacterial activity from 70% ethanol extract, fraction of *n*-hexane, ethyl acetate and water shows the presence of inhibitory power by the clear area around the disk. The largest mean inhibitory diameter is the ethyl acetate fraction with the average was 28 mm at concentration of 50%. The ethyl acetate fraction of guava leaves had the most effective antibacterial activity compared with 70% ethanol extract, fraction of *n*-hexane, and water. The result of the experiment with dilution method of ethyl acetate fraction showed that Minimum Bactericide Concentrations of ethyl acetate fraction was 12,5%.

Keywords : *Syzygium aqueum*, *Escherichia coli* ATCC 25922, diffusion, dilution.