

INTISARI

MARYONO, T., 2017, AKTIVITAS ANTIBAKTERI FRAKSI *n*-HEKSANA, ETIL ASETAT DAN AIR DARI EKSTRAK METANOL DAUN KENIKIR (*Cosmos caudatus* Kunt.) TERHADAP *Klebsiella pneumonia* ATCC 10031, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Daun kenikir (*Cosmos caudatus* Kunth.) mengandung flavonoid, saponin, dan polifenol yang diduga memiliki aktivitas antibakteri. Tujuan penelitian ini adalah untuk mengetahui aktivitas fraksi *n*-heksana, fraksi etil asetat, fraksi air dan ekstrak metanol daun kenikir (*Cosmos caudatus* Kunth.) sebagai antibakteri terhadap *Klebsiella pneumonia* ATCC 10031.

Serbuk daun kenikir dimaserasi dengan metanol, kemudian difraksinasi menggunakan pelarut *n*-heksana, etil asetat, dan air. Fraksi *n*-heksana, etil asetat, air dan ekstrak diuji aktivitas antibakteri menggunakan metode difusi, dengan konsentrasi 50%; 25%; 12,5% dan Metode dilusi, dengan konsentrasi 50%; 25%; 12,5%; 6,2%; 3,1%; 1,5%; 0,7%; 0,3%; 0,1%; 0,09% terhadap bakteri *Klebsiella pneumonia* ATCC 10031.

Hasil penelitian menunjukkan bahwa bahwa fraksi *n*-heksana, etil asetat, air, dan ekstrak daun kenikir mempunyai aktivitas antibakteri terhadap *Klebsiella pneumonia* metode difusi menunjukkan bahwa pada konsentrasi 50% fraksi dan ekstrak memberikan daya hambat yang paling besar daya hambat masing-masing fraksi *n*-heksana 8,5 mm, etil aetat 21,2 mm, air 16,3 mm dan ekstrak 15,8mm dan metode dilusi terhadap fraksi teraktif fraksi etil asetat nilai KBM 25 %, berdasarkan hasil diatas dapat disimpulkan bahwa fraksi etil asetat pada konsentrasi 50% merupakan fraksi teraktif.

Kata kunci: *Cosmos caudatus* Kunt., *Klebsiella pneumoniae* ATCC 10031, antibakteri, fraksi *n*-heksana, fraksi etil asetat, fraksi air.

ABSTRACT

MARYONO, T., 2017, AKTIBAKTERIAL ACTIVITY TEST OF FRACTION *n*-HEXANE, ETHYL ACETATE AND WATER OF METHANOL LEAF EXTRACT (*Cosmos caudatus* Kunth.) AGAINST BACTERIAL *Klebsiella pneumonia* ATCC 10031, THESIS, FACULTY OF PHARMACY, UNIVERSITY OF SETIA BUDI, SURAKARTA.

Cosmos leaves (*Cosmos caudatus* Kunth.) contain flavonoid, saponin, volatile oil and alkaloid. The purpose of this study was to determine the activity of *n*-hexane fraction, ethyl acetate fraction, the fraction of water and ethanol extracts of leaves of Cosmos (*Cosmos caudatus* Kunth.) as an antibacterial against *Klebsiella pneumoniae* ATCC 10031.

Cosmos leaves powder macerated with methanol, and then fractionated using *n*-hexane, ethyl acetate, and water solvents. Methanol extract, *n*-hexane, ethyl acetate, and water fractions were tested antibacterial activity using diffusion method with concentrations of 50%; 25%; 12,5 and dilution method with concentrations of 50.0%; 25%; 12.5%; 6.25%; 3.125%; 1.56%; 0.78%; 0.390%; 0.195% of the bacteria *Klebsiella pneumoniae* ATCC 10031.

The results showed that the fraction of *n*-hexane, ethyl acetate, water, and Cosmos leaf extract has antibacterial activity against *Klebsiella pneumoniae* the diffusion method shown that at a concentration of 50% the fraction and extract provide the inhibition that most large power resistor of each fraction *n*-hexane 18,5 mm, ethyl acetate 21,2 mm, water 16,3 mm and extract 15,8 mm and the method of dilution on the fraction of the most active ethyl acetate fraction of the value of KBM 25% based on the above results it can be concluded that the ethyl acetate fraction at a concentration of 50% is fraction of most active.

Keywords: *Cosmos caudatus* Kunth., *Klebsiella pneumoniae* 10031, antibacterial, the fraction of *n*-hexane, ethyl acetate fraction, the fraction of water.