

INTISARI

FAKIH IQN. 2019. UJI AKTIVITAS ANTIBAKTERI EKSTRAK ETANOL 70%, FRAKSI *n*-HEKSANA, ETIL ASETAT, DAN AIR DARI DAUN STEVIA (*Stevia rebaudiana* Bertonii M.) TERHADAP *Streptococcus mutans* ATCC 25175 SECARA *in vitro*

Daun Stevia memiliki kandungan kimia yang berperan sebagai antibakteri yaitu flavonoid, alkaloid, saponin, tanin, dan steroid. Penelitian ini bertujuan untuk mengetahui aktivitas antibakteri fraksi *n*-heksan, etil asetat, dan air ekstrak etanol 70% daun stevia, mengetahui ekstrak etanol dan ketiga fraksi (*n*-heksan, etil asetat, air) dari daun stevia yang paling efektif, serta mengetahui KHM dan KBM yang dihasilkan dari fraksi teraktif ekstrak etanol 70% daun stevia terhadap *Streptococcus mutans* ATCC 25175.

Uji aktivitas antibakteri pada penelitian ini menggunakan metode difusi dan dilusi. Konsentrasi ekstrak dan fraksi pada metode difusi adalah 10%, 20%, dan 40%. Konsentrasi fraksi teraktif pada metode dilusi adalah 40%, 20%, 10%, 5%, 2,5%, 1,25%, 0,625%, 0,3125%, 0,1563%, 0,0782%. Fraksi teraktif daun stevia diidentifikasi kandungan kimianya dengan metode KLT.

Ekstrak etanol, fraksi *n*-heksan, etil asetat dan air daun stevia memiliki aktivitas antibakteri. Fraksi etil asetat 40% adalah fraksi teraktif, dengan rata-rata diameter zona hambat 16,33 mm. KBM fraksi etil asetat terhadap *Streptococcus mutans* ATCC 25175 sebesar 5%.

Kata kunci : Daun stevia, Fraksi, KBM, *Streptococcus mutans* ATCC 25175

ABSTRACT

FAKIH IQN. 2019. ANTIBACTERIAL ACTIVITY TEST ON ETHANOL, *n*-HEXANE FRACTION, ETHYL ACETATE, AND WATER EXTRACTS OF STEVIA (*Stevia rebaudiana* Bertonii M.) LEAVES ON *Streptococcus mutans* ATCC 25175 BACTERIUM *IN VITRO*.

Stevia leaves contain some chemical compounds serving as antibacterial agent: flavonoid, alkaloid, saponin, tannin, and steroid. This research aimed to find out the antibacterial activity of *n*-hexane, ethyl acetate, and water fractions, and ethanol 70% extracts of stevia leaves, to find out which one has most effective antibacterial activity, whether ethanol extract or three fractions (*n*-hexane, ethyl acetate, water) of stevia leaves, and to find out MIC and MBC produced by the most active ethanol 70% extract of stevia leaves on *Streptococcus mutans* ATCC 25175.

The antibacterial activity test in this study was conducted using diffusion and dilution methods. The concentrations of extract and fraction in diffusion method were 10%, 20%, and 40%. The most active fraction concentrations in dilution method were 40%, 20%, 10%, 5%, 2.5%, 1.25%, 0.625%, 0.3125%, 0.1563%, and 0.0782%. The most active fraction of Stevia leaves is identified for its chemical content using thin layer chromatography method.

Ethanol, *n*-hexane fraction, ethyl acetate, and water extracts of stevia leaves have antibacterial activity. Ethyl acetate fraction 40% is the most active one with inhibiting zone diameter of 16.33 mm. Minimum Killing Concentration value of ethyl acetate fraction on *Streptococcus mutans* ATCC 25175 is 5%.

Keywords: stevia leaves, fraction, Minimum Killing Concentration, *Streptococcus mutans* ATCC 25175.