

ISOLASI DAN IDENTIFIKASI SENYAWA AKTIF PADA KULIT KAYU MASSOIA (*Cryptocarya massoia*) DAN UJI AKTIVITAS SEBAGAI ANTIBAKTERI

Zuzan Crystalia Griapon

13/347433/PA/15239

INTISARI

Isolasi dan identifikasi senyawa aktif pada kulit kayu massoia (*Cryptocarya massoia*) telah dilakukan. Isolasi kulit kayu massoia dilakukan menggunakan metode ekstraksi padat - cair (maserasi), ekstraksi cair – cair dan kromatografi kolom, selanjutnya identifikasi ekstrak kulit kayu massoia dilakukan menggunakan metode uji fitokimia, uji *Gas Chromatography - Massa Spectrophotometry* (GC-MS), dan uji ¹H-NMR. Uji antibakteri dilakukan dengan metode difusi agar, terhadap bakteri *Escherichia coli* dan *Staphylococcus aureus* dengan variasi konsentrasi 250, 500, 1000 dan 1500 ppm.

Hasil ekstraksi padat – cair memperoleh 6,1 g ekstrak kasar. Hasil ekstraksi cair – cair menggunakan pelarut *n*-heksana, etil asetat dan metanol diperoleh 1,8 g, 2,5 g, dan 1,8 g. Hasil uji fitokimia menunjukkan bahwa ekstrak kasar mengandung senyawa golongan alkaloid, terpenoid, tanin, dan flavonoid. Hasil uji GC-MS ekstrak mengandung senyawa 5,6-dihidro-6-pentil-2H-piran-2-non, 2-butylakrolein, isosianat sikloheksana, cis-2,7-nona diena, 2-etil-1,2,3,4-tetrahidro-naptalin dan 6-heptiltetrahidro-2H-piran-2-non. Hasil uji ¹H-MNR fraksi 4 kolom menunjukkan sampel teridentifikasi 16 atom hidrogen. Hasil uji aktivitas sebagai antibakteri menunjukkan ekstrak *n*-heksana konsentrasi pada 1500 ppm, dikategorikan memiliki aktivitas penghambatan rendah, karena memiliki diameter zona hambat terhadap bakteri *Escherichia coli* dan *Staphylococcus aureus* sebesar 4,3 mm dan 4,1 mm.

Kata kunci: Kulit kayu massoia, Ekstraksi padat-cair, Antibakteri.

ISOLATION AND IDENTIFICATION OF ACTIVE COMPOUND OF MASSOIA (*Cryptocarya massoia*) BARK AND IT'S ANTIBACTERIAL ACTIVITY TEST

Zuzan Crystalia Griapon

13/347433/PA/15239

ABSTRACT

Isolation and identification of active compounds of massoia (*Cryptocarya massoia*) bark and it's antibacterial activity test was conducted. The isolation method used solid-liquid extraction, liquid-liquid extraction and column chromatography. It's compound are identified using phytochemical test, gas chromatography-mass spectrophotometry (GC-MS), and ¹H-nuclear magnetic resonance (¹H-NMR). The antibacterial activity test was conducted by diffusion method, to *Escherichia coli* and *Staphylococcus aureus* bacterial in different concentration, were 250, 500, 1000 and 1500 ppm.

The result of solid-liquid extraction was known 6.1 g crude. The result of Liquid-liquid extraction used hexane, ethyl acetat, and methanol solvent, were known 1.8 g, 2.5 g and 1.8 g. The result of phytochemical test were known alkaloids, terpenoids, tannin, and flavonoids. The compounds of massoia bark were known 5,6-dihydro-6-pentyl-2H-pyran-2-none, 2-butylactrolein, cyclohexane isocyanate, cis-2,7-nona-di-ena, 2-ethyl-1,2,3,4-tetrahydro-naptaline and 6-heptiltetrahidro-2H-piran-2-non. The result of column chromatography fraction 4 was known 5,6-dihydro-6-pentyl-2H-pyran-2-none, it's identified used spectrophotometry ¹H-NMR, that sample has 16 hydrogen atoms. Antibacterial activity test was known hexane extract has antibacterial activity on 1500 ppm, it's categorized as weak caused has inhibition zone to *Escherichia coli* and *Staphylococcus aureus* bacterial were 4 and 4.3.

Key words: Bark of massoia, Solid-liquid extraction, Antibacterial.