

ABSTRAK

ANALISIS LC-MS EKSTRAK DAUN SLATRI (*Calophyllum soulattri* Burm. f) ASAL BANYUMAS DAN AKTIVITAS ANTIJAMUR TERHADAP *C. albicans* ATCC 10231

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Latar Belakang : *Candida albicans* adalah flora normal dalam tubuh manusia yang sering menimbulkan infeksi oleh jamur yang disebut kandidiasis. Terapi pada kandidiasis seperti nistatin mengalami resisten untuk *C. albicans*. Salah satu alternatif obat antijamur yang resisten menggunakan daun *C. soulattri* memiliki potensi sebagai agen antijamur. Tujuan penelitian ini untuk mengetahui senyawa metabolit sekunder yang terkandung dan aktivitas antijamur terhadap *C. albicans* dari fraksi *n*-heksan, fraksi etil asetat, dan ekstrak metanol daun *C. soulattri* asal Banyumas.

Metodologi : Ekstrak metanol daun *C. soulattri* dipartisi menjadi fraksi *n*-heksan dan fraksi etil asetat. Fraksi *n*-heksan, fraksi etil asetat, dan ekstrak metanol daun *C. soulattri* dengan konsentrasi kadar 50% diuji LC-MS/MS dan uji aktivitas antijamur.

Hasil Penelitian : Fraksi dan ekstrak daun *C. soulattri* mengandung senyawa metabolit sekunder golongan senyawa flavonoid, triterpenoid dan fenol. Penelitian menunjukkan bahwa fraksi *n*-heksan, fraksi etil asetat, dan ekstrak metanol daun slatri asal Banyumas aktif sebagai antijamur terhadap *C. albicans*.

Kesimpulan : Fraksi *n*-heksan mengandung senyawa amentoflavon, asam porikoat D, asam porikoat F serta dua senyawa *candidate mass* $C_{45}H_{84}O_{14}$ dan $C_{54}H_{78}O_{10}$. Fraksi etil asetat mengandung senyawa amentoflavon, gomisin K2, kaempferol-7-O- α -L-rhamnoside, asam porikoat D serta satu senyawa *candidate mass* $C_{23}H_{30}O_5$. Ekstrak metanol mengandung senyawa amentoflavon, asam porikoat D serta tiga senyawa *candidate mass* $C_{45}H_{84}O_{14}$, $C_{54}H_{78}O_{10}$ dan $C_{26}H_{48}O_{14}$. Fraksi *n*-heksan, fraksi etil asetat, dan ekstrak metanol daun *C. soulattri* memiliki aktivitas antijamur terhadap *C. albicans* ATCC 10231 dengan diameter hambat 5,23 mm (sedang), 5,08 mm (sedang), dan 1,35 mm (lemah) pada konsentrasi 50 %.

Kata Kunci : Ekstrak metanol, LC-MS/MS, *C. soulattri* Burm. f, *C. albicans*.

ABSTRACT

LC-MS ANALYSIS OF SLATRI LEAVES EXTRACT (*Calophyllum soulattri* Burm. f) THE ORIGIN OF BANYUMAS AND ANTI-FUNGAL ACTIVITIES ON *C. albicans* ATCC 10231

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Background: *Candida albicans* is a normal flora in the human body that often causes infection by a fungus called candidiasis. Treatment of candidiasis such as nystatin is resistant to *C. albicans*. One of the alternative resistant antifungal drugs using *C. soulattri* leaves has potential as an antifungal agent. The purpose of this study was to determine the secondary metabolite compounds contained and antifungal activity against *C. albicans* from the n-hexane fraction, ethyl acetate fraction, and methanol extract of *C. soulattri* leaves from Banyumas.

Methodology: The methanol extract of *C. soulattri* leaves was partitioned into n-hexane and ethyl acetate fractions. The n-hexane fraction, ethyl acetate fraction, and methanol extract of *C. soulattri* leaves with a concentration of 50% were tested by LC-MS / MS and antifungal activity.

Research Results: The leaf fraction and extract of *C. soulattri* contains secondary metabolites, flavonoids, triterpenoids and phenols. The study showed that the n-hexane fraction, ethyl acetate fraction, and the methanol extract of slatri leaves from Banyumas were active as an antifungal against *C. albicans*.

Conclusion: The n-hexane fraction of slatri leaves from Banyumas contains amentoflavone, poricic acid D, poricic acid F and two candidate compounds mass $C_{45}H_{84}O_{14}$ and $C_{54}H_{78}O_{10}$. The ethyl acetate fraction contains amentoflavone, gomycin K2, kaempferol-7-O- α -L-rhamnoside, acid porikoat D and one candidate mass $C_{23}H_{30}O_5$. The methanol extract contains amentoflavone, poricic acid D and three candidate mass compounds $C_{45}H_{84}O_{14}$, $C_{54}H_{78}O_{10}$ and $C_{26}H_{48}O_{14}$. The n-hexane fraction, ethyl acetate fraction, and methanol extract of *C. soulattri* leaves had antifungal activity against *C. albicans* ATCC 10231 with an inhibitory diameter of 5.23 mm (moderate), 5.08 mm (moderate), and 1.35 mm (weak) at a concentration of 50%.

Keywords: Methanol extract, LC-MS/MS, *C. soulattri* Burm. f, *C. albicans*.