

Uji aktivitas antioksidan dan penapisan fitokimia dari Ekstrak Daun dan Kulit Batang Medang Putih (*Litsea noronhae* Blume) = Antioxidant activity test and phytochemical screening of *Litsea noronhae* Blume Leaves and Cortex Extract / Maghfira Puspita Ayu

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Abstrak

ABSTRAK

Di Indonesia, *Litsea* tersebar luas di hutan Kalimantan dan Sumatera, namun jenisnya masih kurang dikenal dan pemanfaatannya masih terbatas. Hingga saat ini belum ada literatur mengenai senyawa fitokimia dan aktivitas farmakologis *Litsea noronhae* Blume meskipun telah diketahui penggunaan secara tradisional. Penelitian ini bertujuan untuk menganalisis aktivitas antioksidan dan senyawa metabolit sekunder dari ekstrak kulit batang dan daun tanaman. Siplisia diekstraksi dengan metode maserasi bertingkat menggunakan pelarut n-heksana, etil asetat, dan metanol. Uji aktivitas antioksidan dilakukan secara in vitro dengan metode DPPH (2,2-difenil-1-pikrilhidrazil) dan FRAP (Ferric Reducing Antioxidant Power). Hasil uji aktivitas antioksidan DPPH menunjukkan bahwa ekstrak kulit batang metanol, daun metanol, dan kulit batang etil asetat memiliki nilai IC50 masing-masing sebesar 53,34; 57,43; 93,26 μg / ml. Uji aktivitas antioksidan metode FRAP menunjukkan bahwa ekstrak daun metanol, kulit kayu metanol, dan kulit kayu etil asetat memiliki aktivitas antioksidan tertinggi dengan nilai FeEAC sebesar $44,23 \pm 0,00$; $40,96 \pm 0,01$; dan $26,52 \pm 0,00$ μmol / gram. Uji skrining fitokimia pada ekstrak kulit batang dan daun dalam berbagai pelarut menunjukkan adanya senyawa fenol, flavonoid, glikosida, terpenoid, dan saponin. Ekstrak dengan aktivitas antioksidan yaitu ekstrak daun metanol, kulit batang metanol, dan kulit batang etil asetat masing-masing memiliki kadar fenol total $542,48 \pm 9,58$; $430,48 \pm 5,40$; 405.33 ± 6.98 mg EAG / g ekstrak. Kadar flavonoid total ekstrak kulit batang metanol, daun metanol, dan kulit batang etil asetat berturut-turut adalah $78,33 \pm 1,13$; $62,93 \pm 0,73$; $36,16 \pm 0,35$ mg EK / g ekstrak. Berdasarkan hasil pengujian dapat disimpulkan bahwa ekstrak kulit batang metanol, daun metanol, dan kulit batang etil asetat memiliki aktivitas antioksidan yang kuat serta memiliki kadar fenol dan flavonoid yang tinggi dibandingkan ekstrak lainnya.

ABSTRACT

In Indonesia, *Litsea* is widespread in the forests of Kalimantan and Sumatra, but its species are still less well known and its use is still limited. Until now, there is no literature regarding phytochemical compounds and pharmacological activities of *Litsea noronhae* Blume even though it has been known for its traditional use. This study aims to analyze the antioxidant activity and secondary metabolite compounds from the extracts of plant bark and leaves. Siplisia was extracted by graded maceration method using n-hexane, ethyl acetate, and methanol as solvents. The antioxidant activity test was carried out in vitro using the DPPH (2,2-diphenyl-1-picrylhydrazyl) and FRAP (Ferric Reducing Antioxidant Power) method. DPPH antioxidant activity test results showed that the extracts of methanol bark, methanol leaves, and ethyl acetate bark had IC50 values ​​of 53.34 each; 57.43; 93.26 μg / ml. The antioxidant activity test of the FRAP method showed that the methanol leaf extract, methanol bark, and ethyl acetate bark had the highest

antioxidant activity with FeEAC values of 44.23 ± 0.00 ; 40.96 ± 0.01 ; and 26.52 ± 0.00 $\mu\text{mol} / \text{gram}$. Phytochemical screening tests on stem and leaf bark extracts in various solvents showed the presence of phenol compounds, flavonoids, glycosides, terpenoids, and saponins. Extracts with antioxidant activity, namely methanol leaf extract, methanol bark, and ethyl acetate stem bark each had a total phenol content of 542.48 ± 9.58 ; 430.48 ± 5.40 ; 405.33 ± 6.98 mg EAG / g extract. The total flavonoid levels of methanol bark extract, methanol leaf, and ethyl acetate stem bark were 78.33 ± 1.13 ; 62.93 ± 0.73 ; 36.16 ± 0.35 mg EK / g extract. Based on the test results, it can be concluded that the extracts of methanol bark, methanol leaves, and ethyl acetate bark have strong antioxidant activity and have high levels of phenols and flavonoids compared to other extracts.