

ABSTRAK

AKTIVITAS ANTIOKSIDAN SERTA PENETAPAN KADAR FLAVONOID DAN FENOL TOTAL EKSTRAK HERBA *Lobelia angulata* var. *papuana* (S.Moore) Gilli

Oleh:

NIKEN OVITAMARA

191FF03069

Antioksidan merupakan suatu senyawa yang dapat menghambat atau mencegah oksidasi dan dapat melindungi sel-sel dari kerusakan yang disebabkan radikal bebas. Salah satu tumbuhan yang berpotensi sebagai sumber antioksidan adalah *Lobelia angulata* var. *papuana* (S.Moore) Gilli. Penelitian ini bertujuan untuk menguji aktivitas antioksidan dan penetapan kadar flavonoid dan fenol total dari ekstrak herba *Lobelia angulata* var. *papuana* (S.Moore) Gilli. Ekstraksi dengan metode maserasi bertingkat menggunakan tiga pelarut berbeda yaitu n-heksana, etil asetat, dan metanol. Pengujian aktivitas antioksidan dengan metode peredaman radikal bebas DPPH (2,2-difenil-1-pikrilhidrazil), penetapan kadar flavonoid dan kadar fenol total menggunakan spektrofotometri UV-Vis. Hasil pengujian aktivitas antioksidan ekstrak herba *Lobelia angulata* var. *papuana* (S.Moore) Gilli diperoleh nilai IC₅₀ untuk ekstrak n-heksana; etil asetat; dan metanol secara berturut-turut adalah 97,996; 69,457; dan 62,883 µg/mL. Kadar flavonoid total pada ekstrak n-heksana; etil asetat; dan metanol secara berturut-turut adalah 5,658; 7,887; dan 6,876 (mg QE/ 100 mg ekstrak). Kadar fenol total pada ekstrak n-heksana; etil asetat; dan metanol secara berturut-turut adalah 3,880; 6,174; dan 7,992 (mg GAE/ 100 mg ekstrak). Ekstrak metanol herba memiliki aktivitas antioksidan paling kuat dengan nilai IC₅₀ 62,883 µg/mL, dengan kadar flavonoid total 7,887mg QE/ mg ekstrak, dan kadar fenolat total 7,992 mg GAE/ mg ekstrak. Herba *Lobelia angulata* var. *papuana* (S.Moore) Gilli berpotensi sebagai sumber antioksidan.

Kata Kunci: antioksidan, DPPH, fenol, flavonoid, *Lobelia angulata*

ABSTRACT

ANTIOXIDANT ACTIVITY AND DETERMINATION OF FLAVONOIDS AND TOTAL PHENOL HERB EXTRACTS OF *Lobelia angulata* var. *papuana* (S.Moore) Gilli

By:

NIKEN OVITAMARA

191FF03069

Antioxidants are compounds that can inhibit or prevent oxidation and can protect cells from damage caused by free radicals. One of the plants that has the potential as a source of antioxidants is Lobelia angulata var. papuana (S. Moore) Gilli. This study aims to examine the antioxidant activity and determination of the levels of flavonoids and total phenols from the herba extract of Lobelia angulata var. papuana (S. Moore) Gilli. Extraction by multilevel maceration method using three different solvents namely n-hexane, ethyl acetate, and methanol. Antioxidant activity was tested using the DPPH (2,2-diphenyl-1-picrylhydrazyl) free radical scavenging method, and the determination of flavonoids and total phenol levels was done using UV-Vis spectrophotometry. The results of testing the antioxidant activity of the herb extract Lobelia angulata var. papuana (S.Moore) Gilli obtained IC₅₀ value for n-hexane extract; ethyl acetate; and methanol respectively were 97,996; 69,457; and 62,883 µg/mL. Total flavonoid content in n-hexane extract; ethyl acetate; and methanol respectively were 5,658; 7,887; and 6,876 (mg QE/ 100 mg extract). Total phenol content in n-hexane extract; ethyl acetate; and methanol respectively were 3,880; 6,174; and 7,992 (mg GAE/ 100 mg extract). The herb methanol extract had the strongest antioxidant activity with an IC₅₀ value of 62,883 µg/mL, with a total flavonoid content of 7,887mg QE/ mg extract, and a total phenolic content of 7,992 mg GAE/ mg extract. Lobelia angulata var. papuana (S.Moore) Gilli has the potential as a source of antioxidants.

Keywords: antioxidants, DPPH, phenols, flavonoids, Lobelia angulata