

ABSTRAK

NOVI ANDRIANI, 2023, PERBANDINGAN METODE EKSTRAKSI DAN KONSENTRASI PELARUT ETANOL DAUN LAMTORO (*Leucaena glauca* Bth.) TERHADAP KADAR FLAVONOID TOTAL, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA. Dibimbing oleh Dr. apt. Rina Herowati, M. Si dan apt. Fransiska Leviana, S. Farm., M. Sc.

Daun lamtoro (*Leucaena glauca* Bth.) mengandung senyawa metabolit sekunder berupa flavonoid. Senyawa flavonoid memiliki bioaktivitas sebagai obat. Tujuan penelitian ini adalah memvalidasi metode analisis dan membandingkan metode ekstraksi remaserasi dan perkolasi dengan pelarut etanol 70% dan 96% terhadap kadar flavonoid total ekstrak daun lamtoro menggunakan spektrofotometri UV-Vis.

Desain penelitian ini yaitu penelitian kuantitatif dengan metode studi eksperimental. Serbuk simplisia daun lamtoro dilakukan ekstraksi metode remaserasi dan perkolasi dengan pelarut etanol 70% dan 96%. Ekstrak daun lamtoro dilakukan uji skrining fitokimia dan dilakukan penetapan kadar flavonoid total menggunakan spektrofotometri UV-Vis.

Hasil panjang gelombang maksimum yaitu 427 nm dan serapan stabil pada menit ke-30. Hasil selektivitas didapatkan λ_{maks} yaitu 424 nm, 423 nm, 421 nm, dan 422 nm. Nilai validitas sudah memenuhi persyaratan yang dibuktikan uji linearitas dengan nilai r adalah 0,9994, uji akurasi memenuhi rentang 90 – 107%, uji presisi $CV \leq 2\%$, uji LOD 4,840 ppm, dan uji LOQ 14,665 ppm. Hasil penetapan kadar flavonoid total diperoleh dari metode remaserasi etanol 70% dan 96% sebesar 52% dan 10,678% sedangkan metode perkolasi etanol 70% dan 96% sebesar 5,659% dan 19,669%. Kadar flavonoid total ekstrak etanol 96% dari remaserasi dan perkolasi berbeda signifikan. Metode perkolasi dengan pelarut etanol 96% menghasilkan kadar flavonoid tertinggi.

Kata Kunci: daun lamtoro, metode ekstraksi, etanol, flavonoid total

ABSTRACT

NOVI ANDRIANI, 2023, COMPARISON OF EXTRACTION METHODS AND CONCENTRATIONS OF LAMTORO LEAVES (*Leucaena glauca* Bth.) Ethanol CONCENTRATIONS ON TOTAL FLAVONOID LEVELS, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA. Supervised by Dr. apt. Rina Herowati, M.Si and apt. Fransiska Leviana, S. Farm., M.Sc.

Lamtoro leaves (*Leucaena glauca* Bth.) contain secondary metabolites in the form of flavonoids. Flavonoid compounds are efficacious as antioxidants and have bioactivity as drugs. The purpose of this study was to validate the analytical method and compare the remaceration and percolation extraction methods on total flavonoid content of 70% and 96% ethanol extract of lamtoro leaves by UV-Vis spectrophotometry.

The design of this research is quantitative research using experimental study methods. The lamtoro leaf extract was tested for phytochemical screening, validation of the analytical method, and determination of total flavonoid content. The preparation of the solution involved making a standard quercetin solution, determining the maximum wavelength, operating time, and making a standard curve. The validation parameters for the analytical method consisted of linearity, accuracy, precision, and total flavonoid content testing.

The maximum wavelength is 427 nm and the absorption is stable in the 30th minute. The validity value has fulfilled the requirements as evidenced by the linearity test with the value of r being 0.9994 and the accuracy test fulfills the range of 90 – 107% and the CV precision test is $\leq 2\%$. The results of determining total flavonoid levels were obtained from the 70% and 96% ethanol remaceration method of 52% and 10.678% while the 70% and 96% ethanol percolation method were 5.659% and 19.669%. The total flavonoid content of the 96% ethanol extract from remaceration and percolation was significantly different. The percolation method with 96% ethanol produced the highest levels of flavonoids.

Keywords: lamtoro leaves, extraction method, ethanol, total flavonoids