ABSTRAK

ANDI ALIFIA MUSDALIFAH. Penetapan kadar fenolik dan flavonoid ekstrak etanol daun legundi (*Vitex trifolia* L.) dengan metode spektrofotometri UV-Vis (Dibimbing oleh Muammar Fawwaz dan Andi Trihadi).

Daun legundi (*Vitex trifolia* L.) banyak digunakan oleh masyarakat untuk pengobatan rematik, demam, sakit kepala dan peradangan. Penggunaan daun legundi sebagai tumbuhan obat berkaitan dengan kandungan kimianya yang berupa alkaloid, flavonoid, fenolik, tanin dan terpenoid. Penelitian ini bertujuan untuk mengidentifikasi senyawa fenolik dan flavonoid serta menentukan kadar fenolik dan flavonoid total ekstrak etanol daun legundi. Hasil identifikasi senyawa metabolit daun legundi dengan uji pereaksi warna menunjukkan hasil positif adanya senyawa fenolik dan flavonoid. Penentuan kadar fenolik dan flavonoid total ekstrak etanol daun legundi dilakukan dengan metode spektrofotometri UV-Vis, adapun kadar senyawa fenolik yang diukur pada panjang gelombang 685 nm dengan menggunakan asam galat sebagai pembanding diperoleh kadar sebesar 39,545 miligram *gallic acid equivalent* per gram ekstrak (mgGAE/g ekstrak). Kadar senyawa flavonoid yang diukur pada panjang gelombang 442 nm dengan menggunakan kuersetin sebagai pembanding diperoleh kadar sebesar 35,247 miligram *quercetin equivalent* per gram ekstrak (mgQE/g ekstrak). Dengan demikian, ekstrak etanol daun legundi yang mengandung senyawa fenolik dan flavonoid memiliki potensi untuk dikembangkan sebagai tanaman obat tradisional.

Kata kunci : Daun Legundi, Fenolik, Flavonoid, Spektrofotometri UV-Vis

ABSTRACT

ANDI ALIFIA MUSDALIFAH. *Determination of Phenolic and Flavonoid Content in the Ethanol Extract of Arabian Lilac Leaves (Vitex trifolia L.) by UV-Vis Spectrophotometry* (Supervised by **Muammar Fawwaz** and **Andi Trihadi**).

Arabian lilac leaves (*Vitex trifolia* L.) have garnered attention in traditional medicine for their efficacy in ameliorating conditions such as rheumatism, fevers, headaches, and inflammatory responses. This can be attributed to their rich chemical profile comprising alkaloids, flavonoids, phenolics, tannins, and terpenoids. The present study embarked on a meticulous exploration to both identify and quantify the phenolic and flavonoid compounds present in the ethanol extract of these leaves. Utilizing a colorimetric reagent assay, the metabolites in Arabian lilac leaf extract yielded definitive positive results for phenolic and flavonoid costituents. To ascertain the concentrations of these bioactive compounds, UV-Vis spectrophotometry was employed. The concentration of phenolic compounds, measured at a wavelength of 685 nm with gallic acid as a comparator, was deduced to be 39.545 milligrams of gallic acid equivalent per gram of extract (mgGAE/g extract). Concurrently, the quantification of flavonoids, gauged at a wavelength of 442 nm using quercetin as a standard, amounted to 35.247 milligrams of quercetin equivalent per gram of extract (mgQE/g extract). The findings of the study implies that the substantial presence of phenolic and flavonoid compounds in the ethanol extract of Arabian lilac leaves underscores its potential as a significant resource in the development and advancement of traditional medicinal therapeutics.

Keywords: Arabian lilac Leaves (*Vitex trifolia* L.), Ethanol Extract, Traditional Medicine