

ABSTRAK

Penggunaan tanaman obat telah menjadi bagian yang tidak terpisahkan dari peradaban manusia. Di antaranya, *Cyanthilium cinereum* adalah tanaman obat serbaguna yang dikenal kaya akan kandungan metabolit sekundernya, seperti alkaloid, flavonoid, dan polifenol. Senyawa ini berkontribusi secara signifikan terhadap aktivitas farmakologisnya, *C. cinereum* adalah tanaman obat yang kaya akan metabolit sekunder seperti polifenol, flavonoid, dan alkaloid, yang berkontribusi pada sifat anti-inflamasi, anti-diabetes, dan antioksidan. Penelitian ini menyelidiki pengaruh metode pengeringan yang berbeda yaitu pengeringan oven, pengeringan matahari, dan pengeringan angin terhadap kandungan metabolit sekunder pada daun *C. cinereum*.

Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan tiga perlakuan dan enam kali ulangan, analisis kualitatif dan kuantitatif dilakukan melalui spektrofotometri UV-Vis. Variabel bebas dalam penelitian ini adalah berbagai metode pengeringan yang digunakan untuk mengolah ekstrak *C. cinereum*. Variabel terikatnya adalah konsentrasi senyawa dalam larutan kimia metabolit sekunder yang dihasilkan dari masing-masing jenis pelarut, morfologi daun, berat kering, dan rendemen ekstrak daun *C. cinereum*. Analisis statistik menggunakan ANOVA pada taraf kesalahan 5% dan 1% dan DMRT pada taraf kesalahan 5%.

Hasil penelitian menunjukkan bahwa metode pengeringan berpengaruh terhadap kandungan metabolit sekunder, pengeringan angina mempertahankan kandungan polifenol tertinggi dengan nilai $25,75 \pm 16,71$ mg GAE/L, sedangkan pengeringan sinar matahari menghasilkan rendemen tertinggi.

Kata Kunci: Alkaloid, *Cyanthilium cinereum*, Flavonoid, Metode Pengeringan, Polyphenol

SUMMARY

The use of medicinal plants has been an integral part of human civilization. Among these, *Cyanthilium cinereum* is a versatile medicinal plant known for its rich secondary metabolite content, such as alkaloids, flavonoids, and polyphenols. These compounds contribute significantly to its pharmacological activities. *C. cinereum* is a medicinal plant rich in secondary metabolites like polyphenols, flavonoids, and alkaloids, which contribute to its anti-inflammatory, anti-diabetic, and antioxidant properties. This study investigates the effect of different drying methods oven drying, sun drying, and wind drying on the secondary metabolite content in *C. cinereum* leaves.

This Research using a Completely Randomized Design (CRD) with three treatments and six replications, qualitative and quantitative analyses were conducted through UV-Vis spectrophotometry. The independent variable in this study is that various drying methods are used to process the extract of *C. cinereum*. The dependent variable was the concentration of compounds in a solution of secondary metabolite chemicals produced from each type of solvent, leaf morphology, dry weight, and yield in *C. cinereum* leaf extracts. Statistical analysis used ANOVA at a 5% and 1% error level and DMRT at a 5% error level.

The results showed that the drying method affects the content of secondary metabolites, wind drying preserved the highest polyphenol content with value 25.75 ± 16.71 mg GAE/L, while sun drying yield the highest flavonoid with value 152.65 ± 43.21 mg QE/L and alkaloid with value 126.02 ± 41.10 mg QNE/L levels. Oven drying was the least effective. Therefore, sun drying is considered the most optimal for flavonoid and alkaloid preservation, while wind drying is best for polyphenols.

Keywords: Alkaloid, *Cyanthilium cinereum*, Drying Methods, Flavonoid, Polyphenol