

STANDARISASI SIMPLISIA DAUN ILER
(Coleus scutellarioides (L). benth)

SKRIPSI



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TASIKMALAYA
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STANDARISASI SIMPLISIA DAUN ILER
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**Diajukan Sebagai Salah Satu Syarat Untuk Memperoleh Gelar
Sarjana Farmasi**



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ABSTRAK

Standarisasi Simplisia Daun Iler (*Coleus scutellarioides* (L.) Benth)

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Daun iler (*Coleus scutellarioides* (L.) Benth.) merupakan tanaman obat yang secara empiris digunakan dalam pengobatan tradisional dan mengandung berbagai metabolit sekunder. Standardisasi simplisia diperlukan untuk menjamin identitas, mutu, keamanan, dan konsistensi bahan baku obat tradisional. Penelitian ini bertujuan untuk menentukan karakteristik serta mutu simplisia daun iler berdasarkan parameter spesifik dan nonspesifik. Penelitian dilakukan secara eksperimental melalui pemeriksaan organoleptik, makroskopik dan mikroskopik, skrining fitokimia, penetapan kadar sari larut air dan etanol, kadar air, susut pengeringan, kadar abu total, kadar abu tidak larut asam, cemaran mikroba, serta cemaran logam. Hasil penelitian menunjukkan simplisia berwarna ungu kecoklatan, berbau khas, serta memiliki rasa pahit dan sepat. Pemeriksaan mikroskopik menunjukkan fragmen epidermis, stomata, trikoma, papila, mesofil, idioblast/sklereid, berkas pengangkut, dan sklerenkim. Skrining fitokimia menunjukkan adanya alkaloid, saponin, tanin, polifenol, flavonoid, dan kuinon. Kadar sari larut etanol sebesar $25,65 \pm 1,07\%$ dan air sebesar $22,46 \pm 0,52\%$. Kadar air sebesar $6,00 \pm 2,00\%$ dan kadar abu tidak larut asam sebesar $0,63 \pm 0,12\%$, sedangkan susut pengeringan sebesar $10,19 \pm 0,58\%$ dan abu total sebesar $10,25 \pm 0,05\%$. Cemaran mikroba menunjukkan ALT $6,6 \times 10^3$ CFU/g dan AKK $4,0 \times 10^4$ CFU/g. Cemaran Pb tidak terdeteksi, sedangkan Cd sebesar 1,15 mg/kg. Secara keseluruhan, simplisia memiliki karakteristik spesifik yang jelas, tetapi beberapa parameter nonspesifik masih memerlukan perbaikan untuk memenuhi persyaratan mutu.

Kata Kunci : Daun iler, *Coleus scutellarioides*, simplisia, standardisasi, mutu

ABSTRACT

Coleus scutellarioides (L.) Benth. is a medicinal plant traditionally used for various therapeutic purposes and contains various secondary metabolites. Standardization of crude drugs is necessary to ensure the identity, quality, safety, and consistency of medicinal plant materials. This study aimed to determine the characteristics and quality of *C. scutellarioides* leaf crude drug based on specific and non-specific parameters. An experimental study was conducted through organoleptic, macroscopic, and microscopic examination, phytochemical screening, determination of water- and ethanol-soluble extractive values, moisture content, loss on drying, total ash, acid-insoluble ash, microbial contamination, and heavy metal contamination. The results show that the crude drug is purple-brown, has a characteristic odor, and tastes bitter and astringent. Microscopic examination reveals fragments of epidermis, stomata, trichomes, papillae, mesophyll, idioblasts/sclereids, vascular bundles, and sclerenchyma. Phytochemical screening shows the presence of alkaloids, saponins, tannins, polyphenols, flavonoids, and quinones. The ethanol-soluble extractive value is $25.65 \pm 1.07\%$, while the water-soluble extractive value is $22.46 \pm 0.52\%$. Moisture content is $6.00 \pm 2.00\%$, and acid-insoluble ash is $0.63 \pm 0.12\%$, whereas loss on drying is $10.19 \pm 0.58\%$ and total ash is $10.25 \pm 0.05\%$. Microbial contamination shows a total plate count of 6.6×10^3 CFU/g and yeast and mold count of 4.0×10^4 CFU/g. Lead is not detected, while cadmium is 1.15 mg/kg. Overall, the crude drug has clear specific characteristics, although several non-specific parameters require improvement to meet quality requirements.

Keywords: *Coleus scutellarioides*, crude drug, standardization, quality, medicinal plant