

ABSTRAK

Bajakah kalalawit (*Uncaria gambir* Roxb.) merupakan salah satu tumbuhan yang berasal dari Kalimantan, secara tradisional banyak digunakan sebagai pengobatan dan diketahui memiliki aktivitas antioksidan. Penelitian ini bertujuan untuk mengetahui karakteristik ekstrak etanol batang bajakah kalalawit melalui uji parameter spesifik dan non spesifik serta menentukan aktivitas antioksidannya menggunakan metode DPPH. Penelitian dimulai dengan determinasi, ekstraksi dengan metode sonikasi menggunakan pelarut etanol 70%, hasil ekstraksi diuapkan dengan *vacuum rotary evaporator* lalu dikeringkan hingga bobot tetap menggunakan *waterbath* dan oven. Ekstrak etanol batang bajakah kalalawit diuji parameter spesifik dan non spesifik. Parameter spesifik meliputi organoleptik, kadar senyawa larut air, kadar senyawa larut etanol, dan profil kandungan kimia. Parameter non spesifik meliputi susut pengeringan, kadar air, kadar abu total dan abu tidak larut asam. Pada penentuan profil kandungan kimia menggunakan metode KLT. Hasil pengujian parameter spesifik berupa organoleptik ekstrak kering berwarna coklat pekat dengan aroma khas dan rasa pahit, kadar senyawa larut air dan etanol masing-masing $33,90\% \pm 3,39$ dan $74,13\% \pm 6,55$ dan uji fitokimia ekstrak etanol batang bajakah kalalawit mengandung alkaloid, flavonoid, saponin, dan tanin. Hasil pengujian parameter non spesifik berupa susut pengeringan $12,62\% \pm 0,21$, kadar air $14,66\% \pm 0,07$, kadar abu total $4,90\% \pm 0,25$, dan kadar abu tidak larut asam $0,23\% \pm 0,23$. Hasil aktivitas antioksidan dilihat dari data absorbansi menggunakan metode spektrofotometer UV-Vis dan dihitung persentase penghambatan didapatkan nilai IC_{50} sebesar $8,75 \text{ ppm} \pm 0,10$ masuk dalam kategori sangat kuat.

Kata kunci: bajakah kalalawit, aktivitas antioksidan, karakterisasi, ekstraksi sonikasi

ABSTRACT

Bajakah kalalawit (*Uncaria gambir* Roxb.) is one of the plants originating from Kalimantan, traditionally widely used for medicinal purposes and known to possess antioxidant activity. This study aimed to determine the characteristics of the ethanol extract of bajakah kalalawit stem through specific and non-specific parameter tests and to determine its antioxidant activity using the DPPH method. The study began with plant determination, followed by extraction using the sonication method with 70% ethanol solvent. The extract was concentrated using a vacuum rotary evaporator and then dried to a constant weight using a water bath and oven. The ethanol extract of bajakah kalalawit stem was tested for specific and non-specific parameters. Specific parameters included organoleptic properties, water-soluble compound content, ethanol-soluble compound content, and chemical content profile. Non-specific parameters included loss on drying, water content, total ash content, and acid-insoluble ash content. The chemical content profile was determined using the TLC method. The results of specific parameter testing showed that the dry extract had a dark brown color, distinctive aroma, and bitter taste, with water-soluble and ethanol-soluble compound contents of $33.90 \pm 3.39\%$ and $74.13 \pm 6.55\%$, respectively. Phytochemical screening of the ethanol extract of bajakah kalalawit stem indicated the presence of alkaloids, flavonoids, saponins, and tannins. The results of non-specific parameter testing showed loss on drying of $12.62 \pm 0.21\%$, moisture content of $14.66 \pm 0.07\%$, total ash content of $4.90 \pm 0.25\%$, and acid-insoluble ash content of $0.23 \pm 0.23\%$. Antioxidant activity was determined from absorbance data using the UV-Vis spectrophotometric method, and the percentage inhibition calculation showed an IC_{50} value of $8.75 \text{ ppm} \pm 0.10$, which was categorized as very strong antioxidant activity based on the IC_{50} classification.

Keywords: bajakah kalalawit, antioxidant activity, characterization, sonication extraction