PENGARUH KONSENTRASI ETANOL SEBAGAI PELARUT EKSTRAKSI DAUN KUPU-KUPU (*Bauhinia purpurea* L.) TERHADAP AKTIVITAS PENANGKALAN RADIASI UV

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INTISARI

Latar Belakang : Tabir surya berdasarkan kandungan zat aktifnya terdiri dari sintesis dan alami. Tabir surya yang berasal dari senyawa alami, seperti senyawa fenolik, khususnya golongan flavonoid, dapat melindungi dari kerusakan akibat radiasi matahari. Daun kupu-kupu (*Bauhinia purpurea* L.) merupakan tanaman yang memiliki sejumlah senyawa aktif yang dapat memberikan efek antioksidan seperti flavonoid, fenol dan tanin. Senyawa flavonoid bersifat polar, sehingga untuk memperoleh senyawa digunakan pelarut polar yang sama yaitu etanol. Ekstraksi dengan konsentrasi pelarut etanol yang berbeda dapat membedakan aktivitas tabir surya. Untuk mengetahui aktivitas tabir surya yaitu dengan menguji nilai SPF, %Te dan %Tp.

Tujuan Penelitian : Untuk mengetahui pengaruh konsentrasi etanol sebagai pelarut ekstraksi daun *B. purpurea* terhadap aktivitas penangkal radiasi UV.

Metode Penelitian : Daun kupu-kupu diekstraksi dengan metode maserasi menggunakan pelarut etanol 70% dan etanol 96%. Hasil esktraksi digunakan untuk skrining fitokimia, uji penentuan nilai SPF, %Te dan %Tp dengan spektrofotometer UV-Vis. Hasil analisis data diolah secara statistik.

Hasil Penelitian : Hasil skrining fitokimia ekstrak daun kupu-kupu yaitu positif mengandung senyawa alkaloid, flavonoid, fenolik, tanin, dan steroid. Nilai SPF ekstrak etanol 70% dan 96% berturut-turut 5,098; 9,340. Nilai %Te ekstrak etanol 70% dan etanol 96% berturut-turut 26,477; 12, 499. Nilai %Tp ekstrak etanol 70% dan etanol 96% berturut-turut 28,894; 5,445.

Kesimpulan : Perbedaan konsentrasi etanol berpengaruh signifikan terhadap nilai SPF, %Te, %Tp ekstrak daun kupu-kupu. Nilai SPF, %Te dan %Tp terbaik yaitu pada etanol 96%.

Kata Kunci : Tabir surya, Daun kupu-kupu, SPF

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THE EFFECT OF ETHANOL CONCENTRATION AS THE EXTRACTION SOLVENT ON ANTI-RADIATION ACTIVITY OF *B. purpurea* LEAVES

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ABSTRAK

Background : Sunscreen based on its active substance content consists of synthetic and natural. Sunscreens derived from natural compounds, such as phenolic compounds, especially the flavonoid group, can protect against damage due to solar radiation. *B. purpurea* leaves is a plant that has some active compounds that can provide antioxidant effects such as flavonoids, phenols and tannins. Flavonoid compounds are polar, so to obtain the compounds the same polar solvent is used, namely ethanol. Extraction with different ethanol solvent concentrations can differentiate sunscreen activity. To find out sunscreen activity, test the SPF, %Te, and %Tp values.
Objective : To determine the effect of ethanol concentration as a solvent for extracting *B. purpurea* leaves on the activity of preventing UV radiation.
Method : *B. purpurea* leaves were extracted using the maceration method using 70% ethanol and 96% ethanol as solvents. The extraction results are used for phytochemical screening, and testing to determine SPF, %Te, and %Tp values using a UV-Vis spectrophotometer. The results of data analysis are processed statistically.
Results : The results of the phytochemical screening of *B. purpurea* leaf extract were positive for containing alkaloids, flavonoids, phenolics, tannins, and steroids. The SPF values of 70% and 96% ethanol extracts were respectively 5.098; and 9,340. The %Te values of 70% ethanol and 96% ethanol extracts were respectively 26.477; 12, 499. The %Tp values of 70% ethanol and 96% ethanol extracts were respectively 28.894; 5,445.
Conclusion : Differences in ethanol concentration have a significant effect on the SPF, %Te, and %Tp values of *B. purpurea* leaves extract. The best SPF, %Te, and %Tp values are 96% ethanol.

Keyword : *Sunscreen*, *B. purpurea* leaves, *SPF*

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