PENGARUH KONSENTRASI ETANOL SEBAGAI PELARUT EKSTRAKSI TERHADAP AKTIVITAS PENANGKALAN RADIASI UV DAUN JERUK PURUT (*Citrus hystrix* DC)

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INTISARI

Latar Belakang: Senyawa flavonoid dan fenolik merupakan senyawa yang dapat berpotensi menangkal radiasi UV. Senyawa tersebut diketahui terkandung didalam daun jeruk purut, yang dapat diperoleh dengan cara ekstraksi. Salah satu faktor yang berpengaruh dalam ekstraksi adalah konsentrasi pelarut. Hal ini dapat berpengaruh pada senyawa flavonoid dan fenolik sehingga berpotensi berpengaruh terhadap aktivitas tabir surya.
Tujuan Penelitian: Mengetahui apakah variasi konsentrasi pelarut etanol dapat mempengaruhi nilai SPF, %Te dan %Tp ekstrak daun jeruk purut.
Metode Penelitian: Serbuk daun jeruk purut diekstraksi dengan metode maserasi menggunakan pelarut etanol 50%, 70% dan 96%. Analisis kualitatif berupa skrining fitokimia dan analisis kuantitatif menghitung nilai SPF, %Te dan %Tp menggunakan spektrofotometri UV-Vis. Nilai SPF dihitung dengan persamaan Mansur, %Te dan %Tp dihitung dengan rumus %Te dan %Tp.
Hasil Penelitian: Skrining fitokimia daun jeruk purut positif mengandung senyawa alkaloid, saponin, flavonoid, fenolik dan steroid. Nilai SPF, %Te dan %Tp dari tiga konsentrasi pelarut etanol 50%, 70% dan 96. Pada nilai SPF berturut-turut yaitu 11,3367, 17,5342 dan 22,4968. Nilai %Te 6,7552, 1,6782, dan 0,5466. Nilai %Tp 11,5731, 2,8650 dan 0,6615.
Kesimpulan: Variasi konsentrasi pelarut berpengaruh signifikan terhadap nilai SPF, %Te dan %Tp serta ekstrak etanol 96% menunjukkan penangkalan radiasi UV terbaik.
Kata Kunci: *Citrus hystrix* DC, Etanol, SPF, %Te, %Tp

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EFFECT OF ETHANOL CONCENTRATION AS A SOLVENT EXTRACTION ON UV RADIATION REDUCTION ACTIVITIES OF *Citrus hystrix* DC

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ABSTRACT

Background: Flavonoid and phenolic compounds are compounds that can potentially counteract UV radiation. These compounds are known to be contained in kaffir lime leaves, which can be obtained by extraction. One of the influential factors in extraction is solvent concentration. This can affect flavonoid and phenolic compounds, potentially affecting sunscreen activity.
Objective: Knowing whether variations in ethanol solvent concentration can affect the SPF value, %Te and %Tp of kaffir lime leaf extract.
Methods: Citrus hystrix leaves powder was extracted by maceration method using 50%, 70% and 96% ethanol solvents. Qualitative analysis in the form of phytochemical screening and quantitative analysis calculates SPF, %Te and %Tp values using UV-Vis spectrophotometry. SPF value was calculated by Mansur equation, %Te and %Tp were calculated by %Te and %Tp formula.
Result: Phytochemical screening of citrus hystrix leaves was positive for alkaloid, saponin, flavonoid, phenolic and steroid compounds. SPF, %Te and %Tp values of three solvent concentrations of 50%, 70% and 96% ethanol. The SPF values were 11,3367, 17,5342 and 22,4968 respectively. The %Te values were 6,7552, 1,6782, and 0,5466. The %Tp values were 11,5731, 2,8650 and 0,6615.
Conclusion: Variation of solvent concentration affects significant the SPF, %Te and %Tp values and 96% ethanol extract showed the best UV radiation deterrence. The variation of solvent concentration significantly affected the SPF, %Te and %Tp values and 96% ethanol extract showed the best UV radiation deterrence.

Keywords: *Citrus hystrix* DC, *Ethanol*, *SPF*, %Te, %Tp

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