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PENGARUH PERBEDAAN PELARUT TERHADAP KADAR FENOLIK DAN FLAVONOID TOTAL EKSTRAK DAUN RENGGAK (*Amomum dealbatum Roxb.*) MENGGUNAKAN METODE SPEKTROFOTOMETRI Uv-Vis

ABSTRAK

Latar Belakang : Tanaman renggak (*Amomum dealbatum Roxb.*) merupakan salah satu tanaman yang diketahui mengandung metabolit sekunder antara lain senyawa fenolik dan flavonoid sehingga memiliki aktivitas sebagai antioksidan. Kandungan metabolit sekunder ekstrak daun renggak sangat dipengaruhi oleh efektifitas pelarut dalam menarik senyawa metabolit saat proses ekstraksi. Tujuan penelitian ini untuk mengetahui pengaruh perbedaan pelarut terhadap kadar fenolik dan flavonoid total ekstrak daun renggak (*Amomum dealbatum Roxb.*) serta mengetahui pelarut mana yang menghasilkan kadar fenolik dan flavonoid total yang paling besar menggunakan Spektrofotometri Uv-Vis.

Metode : Metode penelitian yang digunakan yaitu metode eksperimental laboratorium. Penentuan kadar fenolik dan flavonoid total ekstrak daun renggak (*Amomum dealbatum Roxb.*) pada berbagai jenis pelarut yaitu metanol, etil asetat dan n-heksana dilakukan dengan menggunakan metode spektrofotometri Uv-Vis. Analisis data dilakukan dengan SPSS 20 dengan uji lanjutan *Tukey Post Hoc*.

Hasil : Rata-rata kadar fenolik total ekstrak daun renggak yaitu ekstrak metanol 13,2152 mgGAE/g, ekstrak etil asetat 8,0587 mgGAE/g, dan ekstrak n-heksana 4,1152 mgGAE/g, sedangkan rata-rata kadar flavonoid total diantaranya ekstrak metanol 19,0944 mgQE/g, ekstrak etil asetat 13,8835 mgQE/g dan n-heksana 9,3691 mgQE/g. Hasil analisis data SPSS Uji *Tukey Post Hoc* diperoleh terdapat perbedaan signifikan ($p < 0,05$) antara ekstrak metanol, etil asetat dan n-heksana.

Kesimpulan : Jenis pelarut berpengaruh bermakna ($p < 0,05$) terhadap besarnya kadar fenolik dan flavonoid total ekstrak daun renggak (*Amomum dealbatum Roxb.*) yang dihasilkan dimana kadar fenolik dan flavonoid total ekstrak daun renggak tertinggi berada pada ekstrak metanol dengan nilai rata-rata kadar fenolik total 13,2152 mg GAE/g dan kadar flavonoid total 19,0944 mg QE/g.

Kata Kunci : Daun Renggak, Fenolik Total, Flavonoid Total, Spektrofotometri Uv-Visible

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EFFECT OF DIFFERENT SOLUTIONS ON TOTAL PHENOLIC AND FLAVONOID CONTENT OF RENGGAK LEAF EXTRACT (*Amomum dealbatum* Roxb.) USING UV-VIS SPECTROPHOTOMETRY

ABSTRACT

Background : *Renggak* plant (*Amomum dealbatum* Roxb.) is known to contain secondary metabolites phenolic and flavonoid compounds that have antioxidant activity. The secondary metabolites of the extract is strongly influenced by the effectiveness of the solvent in attracting metabolites during the extraction process. The purpose of this study was to determine the effect of different solvents on the total phenolic and flavonoid content of renggak leaf extract (*Amomum dealbatum* Roxb.) and to determine which solvent produced the highest total phenolic and flavonoid levels using UV-Vis Spectrophotometry.

Methods : The research method is used a laboratory experimental method. Determination of total phenolic content of renggak leaf extract (*Amomum dealbatum* Roxb.) in any solutions including methanol, ethyl acetate and n-hexane using UV-Vis spectrophotometric method. Data analysis was performed with SPSS 20 with Tukey Post Hoc.

Results : The average total phenolic content of renggak leaf extract, namely methanol extract 13.2152 mgGAE/g, ethyl acetate extract 8.0587 mgGAE/g, and n-hexane extract 4.1152 mgGAE/g, while the average total flavonoid content including methanol extract 19.0944 mgQE/g, ethyl acetate extract 13.8835 mgQE/g and n-hexane 9.3691 mgQE/g. The results of SPSS data analysis of the Tukey Post Hoc showed that there was a significant difference ($p < 0.05$) between the methanol, ethyl acetate and n-hexane extracts.

Conclusion : The type of solvent had a very significant effect ($p < 0.05$) on the total phenolic and flavonoid levels of the renggak leaf extract (*Amomum dealbatum* Roxb.) produced where the phenolic and total flavonoid content of the total flavonoid of renggak leaf extract was highest in methanol extract with an average value of The average total phenolic content was 13.2152 mg GAE/g and the total flavonoid content was 19.0944 mg QE/g.

Keyboards : *Renggak* Leaves, Total Phenolic, Total Flavonoid, Uv-Visible Spectrophotometry