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PENGARUH PERLAKUAN PROSES MASERASI DAN KONSENTRASI ETANOL TERHADAP KADAR FLAVONOID TOTAL DAN AKTIVITAS ANTIOKSIDAN PADA EKSTRAK JAHE EMPRIT (*Zingiber officinale* var. *Amarum*)

ABSTRAK

Latar belakang : *Zingiber officinale* var. *Amarum* atau jahe emprit mengandung flavonoid yang memiliki aktivitas farmakologis diantaranya sebagai antioksidan. Penyarian metabolit melalui suatu metode dengan menggunakan pelarut mempengaruhi kadar senyawa dan tingkat aktivitas farmakologisnya. Tujuan penelitian ini adalah untuk menganalisis pengaruh perbedaan perlakuan proses maserasi dan konsentrasi etanol terhadap kadar flavonoid total dan aktivitas antioksidan ekstrak Jahe Emprit.

Metode : Sampel Jahe Emprit diperoleh dari Temanggung. Ekstraksi dilakukan dengan metode maserasi dan remaserasi. Penetapan kadar flavonoid total menggunakan metode spektrofotometri UV-Vis. Pengujian aktivitas antioksidan menggunakan metode DPPH, diukur absorbansi menggunakan Spektrofotometri UV-Vis.

Hasil : Dari penelitian diperoleh kadar flavonoid total ekstrak Jahe Emprit : metode maserasi-etanol 70%: 0,674 mgQE/g , remaserasi-etanol 70%: 0,659 mgQE/g, maserasi-etanol 96%: 0,601 mgQE/g, remaserasi-etanol 96% : 0,643 mgQE/g. Hasil penetapan aktivitas antioksidan sampel dengan dua parameter (% inhibisi dan nilai IC₅₀) masing-masing perlakuan, pada metode maserasi-etanol 70% : (32,53% & 56,58 ppm) ; remaserasi-etanol 70%: (35,48% & 22,1 ppm) ; maserasi-etanol 96%: (21,85% & 87,7 ppm); remaserasi-etanol 96%: (24,3% & 67,42 ppm)

Simpulan : Dari uji SPSS, variasi metode ekstraksi dan pelarut tidak memberikan perbedaan signifikan pada kadar flavonoid total, namun menghasilkan perbedaan signifikan pada aktivitas antioksidan ekstrak jahe emprit.

Kata kunci : Jahe Emprit., Flavonoid, antioksidan, Metode ekstraksi, pelarut.

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EFFECT OF MACERATION PROCESS TREATMENT AND ETHANOL CONCENTRATION ON TOTAL FLAVONOID LEVELS AND ANTIOXIDANT ACTIVITY IN EMPRITE GINGER EXTRACT (*Zingiber officinale* var. *Amarum*)

ABSTRACT

Background : *Zingiber officinale* var. *Amarum* or ginger emprit is contain flavonoids which have pharmacological activities such as antioxidants. Extraction of metabolites through a method with use of solvent affects the levels of compounds and the level of pharmacological activity. The purpose of this study was to analyze the effect of maceration process and ethanol concentration solvents on total flavonoid content and antioxidant activity of Emprit Ginger extract.

Methods: The samples of Emprite Ginger were obtained from Temanggung. Extraction process by maceration and remaceration. Determination of total flavonoid content using UV-Vis spectrophotometric method. Testing of antioxidant activity using the DPPH method, absorbance was measured using UV-Vis Spectrophotometry.

Result : From the research, total flavonoid content of Ginger Emprit extract: maceration-ethanol 70%: 0.674mgQE/g, remaceration-ethanol 70%: 0.659 mgQE/g, maceration-ethanol 96%: 0.601mgQE/g, remaceration -ethanol 96% : 0.643mgQE/g. The results of the determination of the antioxidant activity of ginger extract with two parameters (% inhibition and IC50 value) for each treatment using the maceration-ethanol 70% method: (31,53% & 56,58ppm); remaceration-ethanol70% (35,48&22,1ppm) ; maceration-ethanol96%: (21.85%&87.7ppm); remaceration-ethanol96% : (24,3%&67.42ppm)

Conclusion: From the SPSS test, the variation of the extraction method and the solvent did not give a significant difference in the total flavonoid content, but resulted in a significant difference in the antioxidant activity of the emprit ginger extract.

Key words : Ginger Emprit., Flavonoid, antioxidant, Extraction method, solvent.