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PENENTUAN KADAR FLAVONOID TOTAL PADA EKSTRAK JAHE MERAH (*Zingiber Officinale var Rubrum*) DENGAN VARIASI METODE EKSTRAKSI

ABSTRAK

Latar Belakang : Jahe merupakan tanaman obat yang digunakan sebagai obat tradisional yang sudah berkembang pesat. Jahe merah dimanfaatkan sebagai obat tradisional karena mengandung 6-gingerol, 6-shogol, zingerone, fenolat dan flavonoid berfungsi sebagai imunodulator, antioksidan, antiinflamasi, antipiretik dan analgesik. Penelitian ini menggunakan metode ekstraksi maserasi, refluks, dan soxhletasi dengan pembanding rutin dan kuersetin untuk menarik senyawa flavonoid ekstrak jahe merah. Variasi metode ekstraksi dilakukan untuk membandingkan kadar flavonoid total yang dihasilkan dari masing masing metode ekstraksi. Tujuan penelitian ini untuk menganalisis pengaruh metode ekstraksi terhadap kadar flavonoid total ekstrak jahe merah dengan pembanding rutin dan kuersetin.

Metode : Penelitian bersifat ekperimental dengan sampel jahe merah asal Temanggung, menggunakan metode ekstraksi maserasi, refluks, dan soxhletasi dengan pelarut etanol 96%, untuk menganalisa flavonoid dilakukan uji kualitatif dan kuantitatif dan hasil dianalisa dengan spss 16.0.

Hasil : Hasil rendemen diperoleh ekstraksi maserasi 8,08%, refluks 3,5%, dan soxhletasi 6,8%. Hasil diperoleh dengan kandungan senyawa flavonoid dari masing masing ekstrak jahe merah dengan pembanding kuersetin yaitu maserasi (141,379mgQE/g), refluks (158,466mgQE/g), soxhlet (174,971mgQE/g) dan pembanding rutin memperoleh hasil maserasi (92,497mgRE/g), refluks(100,166mgRE/g), soxhletasi (125,732mgRE/g). Berdasarkan hasil uji *Annova* dan uji *Kruskal Wallis* diperoleh nilai sig ($p < 0,05$).

Simpulan : Metode ekstraksi memberikan pengaruh terhadap kadar flavonoid total ekstrak jahe merah dengan pembanding kuersetin dan rutin dengan perbedaan signifikan ($p < 0,05$) serta adanya perbedaan kadar flavonoid antara pembanding kuersetin dan rutin

Kata Kunci : Jahe Merah, Ekstraksi, Kadar Flavonoid Total

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DETERMINATION OF TOTAL FLAVONOID LEVELS IN EXTRACT OF RED GINGER (*Zingiber Officinale var Rubrum*) WITH VARIATIONS OF EXTRACTION METHODS

ABSTRACT

Background : Ginger is a medicinal plant used as a traditional medicine that has developed rapidly. Red ginger is used as traditional medicine because it contains 6-gingerol, 6-shogol, zingerone, phenolics and flavonoids that function as immunomodulators, antioxidants, anti-inflammatory, antipyretic and analgesics. This study used maceration, reflux, and soxhletation extraction methods with routine comparisons and quercetin to extract flavonoid compounds from red ginger extract. Variations of extraction methods were carried out to compare the total flavonoid content produced from each extraction method. The purpose of this study was to analyze the effect of the extraction method on the total flavonoid content of red ginger extract with routine comparisons and quercetin.

Methods: Experimental research with red ginger samples from Temanggung, using maceration, reflux, and soxhletation extraction methods with 96% ethanol solvent, qualitative and quantitative tests for flavonoid analysis and results analyzed with SPSS 16.0.

Result : The yield yield obtained by maceration extraction 8.08%, reflux 3.5%, and soxhletation 6.8%. The results obtained with the content of flavonoid compounds from each red ginger extract with comparison of quercetin, namely maceration (141.379mgQE/g), reflux (158.466mgQE/g), soxhlet (174.971mgQE/g) and routine comparison obtained maceration results (92.497mgRE/g), reflux(100,166mgRE/g), soxhletation (125.732mgRE/g). Based on the results of the Annova test and the Kruskal Wallis test, the sig value was obtained ($p < 0.05$).

Conclusion: The extraction method has an effect on the total flavonoid content of red ginger extract by comparison with quercetin and rutin with a significant difference ($p < 0.05$) and the difference in flavonoid levels between the comparison of quercetin and rutin.

Keywords: Red Ginger, Extraction, Total Flavonoid Level