

**PERBANDINGAN METODE EKSTRAKSI TERHADAP KADAR
FLAVONOID TOTAL EKSTRAK DAUN MERAH
KASTUBA (*Euphorbia pulcherrima* Willd.)**

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Pemanfaatan tanaman yang digunakan untuk mempercantik pekarangan rumah disebut dengan tanaman hias, namun saat ini pemanfaatannya dapat digunakan sebagai tanaman obat. Salah satu tanaman hias yang dapat digunakan sebagai tanaman obat yaitu daun kastuba merah (*Euphorbia pulcherrima* Willd.). Daun tersebut dapat mengobati sakit perut, dan penyembuhan luka karena mengandung flavonoid. Penelitian ini bertujuan untuk menentukan perbedaan kadar flavonoid total dari ekstrak etanol 70% daun merah kastuba (*Euphorbia pulcherrima* Willd.) menggunakan metode ekstraksi maserasi dan refluks dan mengetahui metode ekstraksi yang paling optimal dalam menentukan kadar flavonoid total. Penelitian ini dilakukan secara *true experimental* dimulai dengan determinasi tanaman, diikuti dengan persiapan simplisia, serta dilakukan penetapan karakterisasi simplisia meliputi kadar air, kadar abu total, kadar abu tidak larut asam, dan kadar sari larut etanol dengan hasil masing-masing sebesar 8,5500±0,1229%; 7,2333±0,2023%; 0,2367±0,00750%; dan 21,6400±0,2931%. Ekstraksi dilakukan dengan menggunakan metode maserasi dan refluks dengan pelarut etanol 70%. Hasil penelitian menunjukkan bahwa rendemen ekstrak yang dihasilkan dengan metode refluks yaitu sebesar 23,2623% dan metode maserasi yaitu sebesar 26,2204%. Skrining fitokimia menunjukkan bahwa ekstrak etanol 70% daun merah kastuba (*Euphorbia pulcherrima* Willd.) mengandung flavonoid, alkaloid, saponin, dan tanin. Parameter validasi metode analisis dilakukan dengan menentukan nilai linearitas, Limit Deteksi (LoD) dan Limit Kuantitasi (LoQ), presisi, dan akurasi sehingga diperoleh hasil berturut-turut yaitu persamaan regresi linear $y = 0,0011x + 0,1394$ dengan nilai R^2 sebesar 0,9972; nilai LoD sebesar 0,002685 mg/L; nilai LoQ sebesar 0,00085 mg/L; %RSD sebesar 0,0792%; dan %recovery sebesar 100,4945%. Penetapan kadar flavonoid total dilakukan dengan spektrofotometer UV-Vis pada panjang gelombang maksimum 417 nm. Kadar flavonoid total yang paling optimal terdapat pada ekstrak etanol daun merah kastuba (*Euphorbia pulcherrima* Willd.) dengan metode refluks yaitu sebesar 24,6909 mg EQ/gram ekstrak dibandingkan metode maserasi dengan hasil sebesar 22,7764 mg EQ/gram ekstrak.

Kata kunci: tanaman hias, kastuba merah, *Euphorbia pulcherrima* Willd, flavonoid, maserasi, refluks.

**COMPARISON OF EXTRACTION METHOD ON TOTAL FLAVONOID
CONTENTS IN THE EXTRACT 70% ETHANOL RED KASTUBA LEAF
(EUPHORBIA PULCHERRIMA WILLD.)**

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Utilization of plants that are used to beautify the yard of the house are called ornamental plants, but currently it use can be used as medicinal plants. One of the ornamental plants that can be used as a medicinal plant is red kastuba leaf (Euphorbia pulcherrima Willd.). The leaves can treat stomach aches, and wound healing because it contain flavonoids. This aim of this study was to determine differences total flavonoid content from 70% ethanol extract of red kastuba leaves (Euphorbia pulcherrima Willd.) using maceration and reflux extraction methods and to determine the most optimal extraction method in total flavonoid contents. This research was conducted in a true experimental starting with plant determination, followed by preparation of simplicia, and determination of simplicia characterization including water content, total ash content, acid insoluble ash content, and ethanol soluble extract content with each result of $8,5500 \pm 0.1229\%$; $7.2367 \pm 0.2050\%$; $0.2467 \pm 0.0666\%$; and $21.6367 \pm 0.2914\%$. Extraction was carried out using maceration and reflux method with 70% ethanol as solvent. The results showed that the yield of the extract produced by the reflux method was 23,2623% and the maceration method was 26,2204%. Phytochemical screening showed that 70% ethanol extract of red kastuba leaves (Euphorbia pulcherrima Willd.) contained flavonoids, alkaloids, saponins, and tannins. Parameter validation of the analytical method is carried out by determining the value of linearity, Limit of Detection (LoD) and Limit of Quantity (LoQ), precision, and accuracy so that the results are obtained successively, linear regression equation $y = 0.0011x + 0.1394$ with an R^2 value of 0.9972; LoD value of 0.002685 mg/L; LoQ value of 0.00085 mg/L; %RSD by 0.0792%; and % recovery of 100.4945%. Determination of total flavonoid content was carried out by UV-Vis spectrophotometer at a maximum wavelength of 417 nm. The most optimal total flavonoid levels were found in the ethanol extract of red kastuba leaves (Euphorbia pulcherrima Willd.) using the reflux method, which was 24.6909 mg EQ/gram extract compared to the maceration method with the result of 22.7764 mg EQ/gram extract.

Keywords: ornamental plant, red muskwood, Euphorbia pulcherrima Willd, flavonoids, macerated, reflux.