

PENETAPAN KADAR FLAVONOID TOTAL SERTA FENOLAT TOTAL DARI EKSTRAK DAUN DAN KULIT BATANG FALOAK (*Sterculia quadrifida* R.Br)

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ABSTRAK

Faloak (*Sterculia quadrifida* R.Br) merupakan tanaman obat tradisional dari Nusa Tenggara Timur yang diketahui mengandung senyawa flavonoid dan fenolat. Penelitian ini bertujuan untuk menentukan kadar flavonoid total dan fenolat total dari ekstrak daun dan kulit batang Faloak menggunakan metode ekstraksi refluks bertingkat dengan pelarut n-heksana, etil asetat, dan metanol. Penetapan kadar flavonoid dilakukan dengan metode kolorimetri menggunakan $AlCl_3$, sedangkan kadar fenolat ditetapkan menggunakan metode Folin-Ciocalteu. Hasil penelitian menunjukkan bahwa kadar flavonoid total ekstrak n-heksan, etil asetat, metanol daun faloak dan ekstrak n-heksan, etil asetat, metanol kulit batang faloak secara berturut-turut adalah $2,36 \pm 0,13$; $3,54 \pm 0,05$; $4,15 \pm 0,13$ % (mg QE/g ekstrak) dan $1,17 \pm 0,08$; $2,18 \pm 0,13$; $4,62 \pm 0,18$ % (mg QE/g ekstrak). Sedangkan hasil kadar fenolat total ekstrak n-heksan, etil asetat, metanol daun faloak dan ekstrak n-heksan, etil asetat, metanol kulit batang faloak secara berturut-turut adalah $4,32 \pm 0,09$; $5,27 \pm 0,19$; $6,86 \pm 0,19$ % (mg GAE/g ekstrak) dan $5,34 \pm 0,05$; $5,97 \pm 0,14$; $6,96 \pm 0,14$ % (mg GAE/g ekstrak).

Kata Kunci: Faloak, *Sterculia quadrifida*, flavonoid total, fenolat total, ekstraksi refluks

DETERMINATION OF TOTAL FLAVONOID CONTENT AND TOTAL PHENOLIC CONTENT FROM EXTRACTS OF FALOAK LEAVES AND STEM BARK (*Sterculia quadrifida* R.Br)

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ABSTRACT

Faloak (*Sterculia quadrifida* R.Br) is a traditional medicinal plant from East Nusa Tenggara, Indonesia, known to contain flavonoids and phenolic compounds. This study aimed to determine the total flavonoid and total phenolic content from leaf and stem bark extracts of Faloak using a sequential reflux extraction method with n-hexane, ethyl acetate, and metanol solvents. Total flavonoid content was determined using the AlCl_3 colorimetric method, while total phenolic content was analyzed using the Folin-Ciocalteu method. The results showed that the total flavonoid contents in n-hexane, ethyl acetate, and metanol extracts of Faloak leaves were 2.36 ± 0.13 ; 3.54 ± 0.05 ; and $4.15 \pm 0.13\%$ (mg QE/g extract), respectively. Meanwhile, the bark extracts contained 1.17 ± 0.08 ; 2.18 ± 0.13 ; and $4.62 \pm 0.18\%$ (mg QE/g extract), respectively. For the total phenolic content, the leaf extracts contained 4.32 ± 0.09 ; 5.27 ± 0.19 ; and $6.86 \pm 0.19\%$ (mg GAE/g extract), respectively, while the bark extracts contained 5.34 ± 0.05 ; 5.97 ± 0.14 ; and $6.96 \pm 0.14\%$ (mg GAE/g extract), respectively. These findings indicate that metanol extracts of both the leaves and bark have the highest total flavonoid and phenolic contents compared to other solvents, suggesting that these bioactive compounds are more polar in nature. Therefore, metanol is considered the most effective solvent for extracting flavonoids and phenolics from Faloak.

Kata Kunci : Faloak, *Sterculia quadrifida*, total flavonoids, total phenolics, reflux extraction