

**ISOLASI, IDENTIFIKASI, DAN PENETAPAN KADAR TOTAL  
FLAVONOID DARI FRAKSI ETIL ASETAT DAUN JINTEN  
(*Coleus amboinicus* Lour.) DENGAN METODE  
SPEKTROFOTOMETRI UV-VIS**

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**ABSTRAK**

Daun jinten (*Coleus amboinicus* Lour.) mengandung berbagai senyawa kimia yang terbukti memberikan banyak khasiat, salah satunya sebagai antioksidan. Khasiat tersebut diketahui dari adanya senyawa flavonoid yang terkandung dalam daunnya. Penelitian ini bertujuan untuk mengisolasi, mengidentifikasi, dan menetapkan kadar total flavonoid dari fraksi etil asetat daun jinten. Isolasi senyawa flavonoid diawali dengan ekstraksi ultrasonik dengan variasi suhu (45, 60, dan 75°C) dan waktu ekstraksi (10, 15, dan 20 menit), kemudian dilakukan analisis rendemen, uji skrining fitokimia, dan uji kadar total flavonoid. Ekstrak dengan kadar total flavonoid tertinggi kemudian dilakukan pemisahan dengan fraksinasi menggunakan pelarut *n*-heksan, etil asetat, dan air. Flavonoid pada fraksi etil asetat kemudian dilakukan pemisahan KLT preparatif dengan eluen *n*-butanol : asam asetat : air (4 : 1 : 5). Identifikasi flavonoid menggunakan spektrofotometer UV-Vis dengan baku pembanding kuersetin. Hasil kadar total flavonoid fraksi etil asetat daun jinten sebesar 208,96 mQE/gram, uji KLT preparatif menunjukkan terdapat satu noda yang sama dengan baku kuersetin. Noda tersebut berwarna kuning kehijauan berada pada R<sub>f</sub> 0,673 hampir sama dengan noda baku kuersetin R<sub>f</sub> 0,667. Hasil identifikasi isolat dapat diduga bahwa senyawa flavonoid tersebut merupakan golongan flavonol dengan rentang panjang gelombang berada diantara 350 – 385 nm (pita I) dan 250 – 280 nm (pita II).

**Kata kunci:** daun jinten, flavonoid, ekstraksi ultrasonik, spektrofotometri UV-Vis

# ISOLATION, IDENTIFICATION, AND DETERMINATION OF TOTAL FLAVONOID CONTENT FROM THE ETHYL ACETATE FRACTION OF CUMIN LEAVES (*Coleus amboinicus* Lour.) USING UV-VIS SPECTROPHOTOMETRY METHOD

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## ABSTRACT

Cumin leaves (*Coleus amboinicus* Lour.) contain various chemical compounds proven to provide many benefits, one of which is as an antioxidant. These properties are known from the presence of flavonoid compounds contained in the leaves. This study aims to isolate, identify, and determine the total levels of flavonoids from the ethyl acetate fraction of cumin leaves. Isolation of flavonoid compounds was started by ultrasonic extraction with variations in temperature (45, 60, and 75°C) and extraction time (10, 15, and 20 minutes), then carried out yield analysis, phytochemical screening tests, and total flavonoid content tests. The extract with the highest total flavonoid content was then separated by fractionation using *n*-hexane, ethyl acetate, and water as solvents. Flavonoids in the ethyl acetate fraction were then separated by preparative TLC with the eluent *n*-butanol : acetic acid : water (4 : 1 : 5). Identification of flavonoids using a UV-Vis spectrophotometer with quercetin as a reference standard. The results of the total flavonoid content of the ethyl acetate fraction of cumin leaves were 208.96 mQE/gram, the preparative TLC test showed that there was one spot that was the same as the quercetin standard. The stain is greenish yellow at R<sub>f</sub> 0.673, almost the same as the standard quercetin stain at R<sub>f</sub> 0.667. The results of the identification of isolates can be suspected that the flavonoid compound is a flavonol group with a wavelength range between 350 – 385 nm (band I) and 250 – 280 nm (band II).

**Keywords:** cumin leaves, flavonoid, ultrasonic extraction, UV-Vis spectrophotometry