

ABSTRACT

Hyptis capitata is a plant traditionally used to treat various diseases, including digestive disorders and wounds. Secondary metabolite compounds such as flavonoids, tannins, steroids, terpenoids have been identified in it. The ethyl acetate (F_{EA}) fraction of *Hyptis capitata* leaves was reported to have high antioxidant activity with a value of 15.15 $\mu\text{g/mL}$. This study aims to isolate and characterize bioactive compounds from F_{EA} of *H. capitata* leaves. The leaf maceration process using methanol produced a methanol extract which was then partitioned with *n*-Hexane, dichloromethane, and ethyl acetate. Phytochemical screening showed F_{EA} positive for flavonoids and tannins. Isolation was carried out by flash chromatography using a chloroform-methanol gradient eluent, resulting in two large fractions (A and B). Fraction B was further separated by preparative thin layer chromatography, resulting in seven isolates, with a focus on isolates E and F. Purity testing using TLC showed that both isolates had a single spot. UV-Vis spectroscopy analysis of isolate E showed maximum absorption peaks at 279 and 338 nm, while isolate F showed peaks at 282 and 318 nm. FTIR analysis confirmed the presence of O-H, aromatic C=C, C-O, and aromatic C-H functional groups in isolates E and F. TLC-MS results for isolate F showed a molecular ion $[M+H]^+$ of 273 m/z. Based on the combined data from the three spectroscopic methods and comparison with reference data, the complete structure of isolate E has not been deduced, and isolate F is suspected to be closely related to naringenin.

Keywords: *Hyptis capitata*, isolation, chromatography, naringenin