

ABSTRACT

Gedong Gincu mango leaves (*Mangifera indica* L. cv. *Gedong Gincu*) are a source of bioactive compounds that have the potential as natural antioxidants because they contain various secondary metabolites, especially flavonoids and phenolic compounds. This study aims to isolate and identify flavonoid compounds from the ethanol fraction of *Gedong Gincu* mango leaves and identify their antioxidant activity. The study began with plant determination, sample preparation, extraction using the maceration method, dechlorophyllation, liquid-liquid fractionation, phytochemical screening, determination of total phenol content using the Folin-Ciocalteu method, determination of total flavonoid content using the $AlCl_3$ method, antioxidant activity test using the DPPH method, and isolation of flavonoids through gravity column chromatography which were identified using UV-Vis spectrophotometry with shear reagents. The results showed that the ethanol fraction of *Gedong Gincu* mango leaves contained alkaloids, flavonoids, saponins, tannins, and steroids. The total phenol and total flavonoid content were 355.01 ± 0.57 mg GAE/g and 14.33 ± 0.01 mg GE/g, respectively, while the antioxidant activity showed an IC_{50} value of 64.448 mg/L which is included in the strong category. The isolation results produced four fractions, with isolate BC_2 as the selected isolate for further identification. Based on UV-Vis spectrophotometric analysis using a shear reagent, isolate BC_2 is suspected to be a 5,7,8-trihydroxyisoflavone compound.

Keywords: Isolation, ethanol fraction, flavonoids, phenols, antioxidants