

ABSTRACT

Gedong Gincu mango leaves (Mangifera indica L. cv. Gedong Gincu) are known to contain secondary metabolite compounds that have the potential as natural antioxidants, particularly flavonoids and phenolic compounds. This study aimed to determine the secondary metabolite content, total phenolic content, total flavonoid content, antioxidant activity, and to isolate flavonoid compounds from the ethyl acetate fraction of Gedong Gincu mango leaves from Sragen Regency. The samples were extracted using the maceration method with 96% ethanol, followed by fractionation using n-hexane and ethyl acetate. Total phenolic content was analyzed using the Folin–Ciocalteu method, total flavonoid content using the $AlCl_3$ method, and antioxidant activity was tested using the DPPH method. Flavonoid isolation was carried out using column chromatography and preparative thin-layer chromatography (PTLC), while isolate identification was performed using UV–Vis spectrophotometry and shift reagents. The results showed that the simplicia and ethanol extract contained flavonoids, tannins, saponins, alkaloids, and steroids/triterpenoids. The ethyl acetate fraction had a total phenolic content of 375.737 ± 0.286 mg GAE/g extract, a total flavonoid content of 38.500 ± 0.057 mg QE/g extract, and an IC_{50} value of 28.081 ppm, indicating very strong antioxidant activity. Isolate BC2 was presumed to belong to the flavone group, with apigenin as the possible compound.

Keywords: *Gedong Gincu Mango Leaves, Isolation, Total Phenolic Content, Total Flavonoid Content, Antioxidant.*