

ABSTRACT

THE CHARACTERIZATION OF FLAVONOID COMPOUND ISOLATED FROM METHANOL EXTRACT OF *Gliricidia maculata* LEAVES

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This research aims to isolate flavonoid compound which has botanical insecticide from methanol extract of *Gliricidia maculata* leaves. The methanol extract was obtained from maceration of *G. maculata* leaves powder. Fractionation and purification of the extract was done with column chromatography method using *Sephadex LH-20* as adsorbent and MeOH : H₂O (4:1) as eluent. The fractions resulted in was monitored by thin layer chromatography method with adsorbent of *Silica Gel 60 F₂₅₄* on aluminium plate and DCM : MeOH (7:3) as eluent. Identification of flavonoid compound using AlCl₃ gave R_f value of 0,531. The relatively pure fraction was recrystallized and gave yellowish white crystal RIO-46A about 0,35 gram. Analysis of the crystal using UV-Vis spectrophotometry showed maximum adsorption at λ 268 (band II) and λ 349 (band I) and analysis using IR spectrophotometry gave adsorption bands on wavelength numbers of 3373 cm⁻¹ (O-H), 2926-2885 cm⁻¹ (aliphatic C-H), 1593-1459 cm⁻¹ (C = C aromatic), 1729 cm⁻¹ (C = O) and 1073 cm⁻¹ (C-O-C). Based on both analysis method, it is concluded that isolate was a flavonoid aglycon from flavon. The result of bioassay test toward of papaya mealybug (*Paracoccus marginatus*) showed that the isolate has a characteristic of botanical insecticide with LC₅₀ 3,35% after 12 hours of treatment.

Keywords: flavonoid compounds, isolation, *Gliricidia* leaves, botanical insecticide