

**ISOLATION OF FLAVONOID IN LEAVES OF *PIPER*
*SARMENTOSUM***

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ABSTRACT

ISOLATION OF FLAVONOID IN LEAVES OF PIPER SARMENTOSUM

Present study was carried out to evaluate the possibility of *Piper sarmentosum* to be used as medicinal herbs to treat diabetes. The leaves of *Piper sarmentosum* was extracted with polar and non-polar solvents. The active component which was flavonoids was found in ethanol, chloroform and ethyl acetate extract. Qualitative determination of flavonoid compounds in the extract was performed by using thin layer chromatography (TLC). The result of TLC analyses showed that the greatest numbers of flavonoids were determinate in ethyl acetate extract with the R_f values of 0.35, 0.47 and 0.66. The best solvent system used for separation of the compounds was hexane:ethyl acetate (AcOEt); 1:2 (v/v). Three fractions were obtained from chromatography analysis of ethyl acetate extract. After performing thin layer chromatography for R_f values confirmations, there were found that the three compounds obtained before were impurified due to there were still other compounds observed with different R_f values. Purification of flavonoids compound from the three fractions were done by preparative thin layer chromatography. The desired bands gave positive result as flavonoid compounds after sprayed with $FeCl_3$ and observed at 365 nm UV-lamp at R_f value of 0.74, 0.90 and 0.97 for fraction 1, 0.93 for fraction 2 and 0.93 for fraction 3. Quantitative determination of the five target compound was performed by High Performance Liquid Chromatography (HPLC). The mean concentration of compound 1,2,3,4 and 5 measured were 25.88 $\mu\text{g/mL}$, 2.62 $\mu\text{g/mL}$, 8.97 $\mu\text{g/mL}$, 3.82 $\mu\text{g/mL}$ and 3.86 $\mu\text{g/mL}$. Preliminary structure elucidation of isolated compounds was based on NMR spectrum. It was confirmed that compound 4 was wogonin and it was characterized as 5,7-dihydroxy-8-methoxy-avone.