PHYTOCHEMICAL SCREENING, TOTAL PHENOLIC CONTENT AND ANTIOXIDANT ACTIVITY OF *Muntingia calabura*

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ABSTRACT

PHYTOCHEMICAL SCREENING, TOTAL PHENOLIC CONTENT AND ANTIOXIDANT ACTIVITY OF *Muntingia calabura*

The purpose of this study to identify and compare the phytochemical screening, total phenolic contents and antioxidant activity *Muntingia calabura* leaves using three different polarities of solvents (methanol, ethyl acetate and *n*-hexane) and give percent yield 8.96% (methanol), 6.42% (ethyl acetate) and 5.31% (*n*-hexane). The phytochemical screening was conducted using the established standard procedure. The methanolic extract revealed the presence of flavonoids, phenols, steroids, triterpenes, tannins, reducing sugars and saponins. The total phenolic content and the antioxidant activity of the extracts were determined using Folin-Ciocalteu method and DPPH radical scavenging assay, respectively. The total phenolic content for the methanol, ethyl acetate and *n*-hexane extracts were 8.20, 4.42 and 2.80 mg GAE/g, respectively. High total phenolic content was revealed in methanolic extract. The DPPH radical scavenging assay test showed that all the solvent extracts has an antioxidant activity. The methanol extract has the highest antioxidant activity compared to ethyl acetate and *n*-hexane extracts. In conclusion, the methanol extract has given the significant IC_{50} 167.70 µg/mL when compare with positive control (ascorbic acid).