

**PHYTOCHEMICAL SCREENING, TOTAL PHENOLIC CONTENT
AND ANTIOXIDANT ACTIVITY OF *Artocarpus heterophyllus*
AND *A. altilis***

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ABSTRACT

PHYTOCHEMICAL SCREENING, TOTAL PHENOLIC CONTENT AND ANTIOXIDANT ACTIVITY OF *Artocarpus heterophyllus* AND *A. altilis*

The purpose of this study were to compare the presence of phytochemical groups, total phenolic content and antioxidant activity of the leaves of *Artocarpus heterophyllus* and *A. altilis*. The extracts were obtained using sequel maceration and the phytochemicals were screened using several chemical tests. The total phenolic content was performed using Folin-Ciocalteu method while antioxidant activity applied DPPH radical scavenging activity assay. The ethanol extracts gave the highest extraction efficiency for *A. heterophyllus* (36.94%) and *A. altilis* (33.94%). Phytochemical screening on both species revealed the presence of phenols, flavonoids, tannins, reducing sugar, steroids and triterpenoids and the absence of alkaloids and saponins. The ethanol extract of *A. heterophyllus* showed the highest total phenolic content at 3.498 mg GAE/g followed by the ethanol extract of *A. altilis* (1.178 mg GAE/g) and ethyl acetate extract of *A. heterophyllus* (0.3312 mg GAE/g). The *A. heterophyllus* ethanol extract and *A. altilis* ethanol extract demonstrated moderate DPPH radical scavenging activity with IC₅₀ value 100.33µg/mL and 168.93µg/mL respectively. The results of this study indicated that the leaves of *A. heterophyllus* and *A. altilis* have the potential as source of antioxidant agent due to various phenolic compounds and antioxidant activity.