

GC-MS Based Chemical Profiling and Evaluation of Antioxidant Potential of Leaves and Stems of *Alternanthera Sessilis* Red from Sabah, Malaysia

ABSTRACT

Objectives: The aim of the current study was to perform phytochemical screening and determination of total phenolics, total flavonoids and antioxidant activity of various crude extracts of *Alternanthera sessilis* red leaves.

Methods: Determination of antioxidant nature of *Alternanthera sessilis* red was carried out by DPPH radical scavenging method. GC-MS analysis of various crude extracts resulted in the presence of different types of low and high molecular weight compounds consisting of carbohydrates, fatty acid and vitamins.

Results: Among all the extracts, methanol extracts exhibited higher DPPH radical scavenging activity with IC_{50} value of 0.183 mg/ml. BHT used as the positive control showed IC_{50} value of 0.089 mg/mL. The results suggested that the crudes extracts of *Alternanthera sessilis* red exhibit moderate antioxidant activity. The total phenolic content (279.8 ± 0.02 mg GAE/g) and total flavonoid content (250.7 ± 0.03 mg QE/g) in methanol was estimated higher as compared to other solvents.

Conclusion: The total flavonoid content and total phenolic content were found to be higher in methanolic extract followed by ethyl acetate and hexane extracts.