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ANTIOXIDANT POTENTIAL OF BARK COLUMN FRACTIONS OF *Stereospermum suaveolens*

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Antioxidants are molecules that primarily slow down or prevent oxidation reactions. Their application in pharmacology is valuable to improve current treatments for diseases. Medicinal plants are a rich source of biologically active compounds such as flavonoids, phenolic compounds, *etc*., which may be responsible for their antioxidant activities. This study aimed to investigate the antioxidant activity of the column chromatographic fractions of crude extracts of *Stereospermum suaveolens* bark. The extraction was performed using ultrasound sonication, followed by fractionation with silica gel column chromatography. The antioxidant activity test was carried out using 2, 2-diphenyl-1-picrylhydrazyl (DPPH) assay with 200 µg/mL fraction solutions, and L-Ascorbic acid was used as the standard. Thin-layer chromatography was performed to analyse the chemical profile. Methanolic bark extracts of *S. suaveolens* yielded seven fractions, with radical scavenging percentages ranging from 13.22% to 82.51%. The test results further depicted that the third and fourth fractions possessed high antioxidant activities with the percentage radical scavenging activity of 82.51% and 56.27%, respectively, whereas other fractions showed weak antioxidant activities. However, the standard L-Ascorbic acid exhibited the highest antioxidant activity compared to bark fractions (92.83%). However, the radical scavenging activities of all active bark fractions were lower than that of L-Ascorbic acid as a positive control. The study concluded that most active fractions demonstrated good antioxidant activity, worthy for further study to isolate specific compound/s which is/are responsible for antioxidant activity.

Keywords: Antioxidant activity, Bark extracts, *Stereospermum suaveolens*