In Vitro Antioxidant Activity of *Rhodomyrtus tomentosa* leave by 80% Ethanol Extraction

By

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DECLARATION

I hereby declare that this thesis is my original work and has not been submitted previously or currently for any other degree at UiTM or any other institutions

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ABSTRACT

In vitro antioxidant activity of *Rhodomyrtus tomentosa* leave by 80% ethanol extraction

A wide range of phytochemicals present in leaves of *Rhodomyrtus tomentosa* act as antioxidant agents and play an important role in protection against free radical. Hence, the present investigation was carried out to estimate the phytochemical properties and antioxidant activity of 80% ethanol of *Rhodomyrtus tomentosa* leaves. Phytochemical properties of Total Phenolic Compound (TPC) were determined by Follin-Ciocalteu method and for Flavonoid Compound (TFC) by Aluminium Chloride Cholorimetric Assay. While antioxidant activities was determined by Total Ferric Reducing Antioxidant Power (FRAP) and 2, 2-diphenyl-1-picryl-hydrazyl-hydrate (DPPH) scavenging activity. In 1 mg/ml of *Rhodomyrtus tomentosa* 80% ethanolic leaves used, the phenolic content was 10.82 ± 0.673 mg of Gallic Acid Equivalent (GAE)/g, the flavanoid content was 2.40 ± 0.501 mg of Quercetin Equivalent (QE) /g, the antioxidant capacity(FRAP) was 24.10± 0.747 mg of GAE/g of extract and 189.18 ± 0.26 ± 0.426 % inhibition for DPPH scavenging activity. Above result revealed that 80% ethanol extraction displayed *Rhodomyrtus tomentosa* leave extract contain high antioxidant capacity due to its phytochemical properties.

Key Words: *Rhodomyrtus tomentosa*, Antioxidant, 80% ethanol, UiTM, Phytochemical properties

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