UNIVERSITI TEKNOLOGI MARA

PROXIMATE ANALYSIS, TOTAL PHENOLIC AND FLAVONOID COMPOUNDS OF SELECTED MANGROVE SPECIES IN SELAT PULAU TUBA, LANGKAWI, KEDAH

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AUTHOR 'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Undergraduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

The objective of this study was to compare the nutrition composition, phenolic and flavonoid compounds found in selected mangrove species in Selat Pulau Tuba. In this study, the nutritional composition, phenolic and flavonoid compounds of *Rhizophora mucronata, Rhizophora apiculata, Ceriops tagal and Xylocarpus rumphii* were investigated over a range parameter such as moisture, ash, crude fiber, crude protein, crude fat, total phenolic contents (TPC) and total flavonoid contents (TFC). The results of moisture contents was varied at 23 – 57%, ash contents was varied at 10.13 – 17.05%, crude fiber was varied at 18.56 – 27.56%, crude protein was varied at 4.48 – 9.28%, crude fat was varied at 2.43 – 4.81%, TPC was varied at 24.79 – 28.43 mgGAE/g and TFC was varied at 13.33 – 17.95 mgQE/g for each of the analysed mangrove species. Proximate analysis was used to checks the nutritional composition while Folin Ciocalteu method and aluminum chloride colorimetric method was used to identify the TPC and TFC of the selected mangrove species in Selat PulauTuba. From this study, each of the selected mangrove species do have high contents of nutritional composition and antioxidant composition as all of the selected mangrove species shown the presence of the high phenolic and flavonoid contents. The results gained from this study, could give advantages towards community lived around Selat Pulau Tuba as they could use it for medical purpose, animal feeds and plant-based nutrients.

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