DETERMINATION OF PHYTOCHEMICAL CONSTITUENTS AND ANTIOXIDANT ACTIVITY OF *Hornstedtia havilandii* PEEL AND FLESH EXTRACT

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ABSTRACT

DETERMINATION OF PHYTOCHEMICAL CONSTITUENTS AND ANTIOXIDANT ACTIVITY OF *Hornstedtia havilandii* PEEL AND FLESH EXTRACT

Nowadays, the usage of traditional plants for medicinal purposes has been broadened due to their beneficial bioactivities. Antioxidant phytochemicals play a key role in oxidative stress control and in the prevention of related disorders, such as premature aging, degenerative diseases, diabetes, and cancer. In this study the peel and flesh of *Hornstedtia havilandii* (Tolidus) was subjected to different solvent extractions which were water, methanol (80%), ethyl acetate (80%) and hexane (80%). The objectives of this study are to detect phytochemical constituents, quantify the total flavonoid content, quantify the vitamin C content and the antioxidant activity of peel and flesh extracts of *Hornstedtia havilandii*. The crude extracts of the peel and flesh were done by maceration. Phytochemical screening was performed using standard qualitative method and TFC was determined using the aluminum colorimetric method while the antioxidant activity of the extracts was performed by DPPH scavenging assay. Phytochemical screening suggested the presence of saponin, flavonoids, tannins, alkaloid, quinone and phenol in water, methanol, ethyl acetate and hexane extract. The highest amount of total flavonoid of *Hornstedtia havilandii* for peel and flesh extracts was hexane extract were 430 mgRE/ml and 440 mgRE/ml. The quantification of vitamin C content in *Hornstedtia havilandii* were determined for peel showed fresh and dried extract which are 28.9 mg and 10.97 mg respectively. While for the flesh showed that fresh and dried extract which are 52.84 mg and 23.93 mg. Moreover in antioxidant activity all extract showed high antioxidant activity with the value for peel extracts range 91% to 95%, respectively. While for flesh extract range 89 % to 96% respectively. The results reveal this plant having strongly active in antioxidant activity of the all extract may be associated with a higher content of flavonoid and vitamin C compounds.