

## The Correlation of Total Phenol Content with Free Radicals Scavenging Activity and Effect of Ethanol Concentration in Extraction Process of Mangosteen Rind (*Garcinia mangostana*)

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**Abstract :** The use of synthetic antioxidants often causes a negative effect on health and increases the incidence of carcinogenesis. Development of the natural antioxidants should be investigated. However, natural antioxidants have a low toxicity and are safe for human consumption. Ethanol extract of mangosteen rind (*Garcinia mangostana*) contains natural antioxidant compounds that have various pharmacological activities. Antioxidants from the ethanol extract of mangosteen rind have free radicals scavenging activities. The scavenging activity of ethanol extract of mangosteen rind was determined by DPPH method. The phenolic compound from the ethanol extract of mangosteen rind is determined with Folin-Ciocalteu method. The results showed that the absolute ethanol extract of mangosteen rind has IC<sub>50</sub> of 40.072 ug/mL. The correlation of total phenols content with free radical scavenging activity has an equation  $y: 5.207x + 205.51$  and determination value ( $R^2$ ) of 0.9329. Total phenols content from the ethanol extract of mangosteen rind has a good correlation with free radicals scavenging activity of DPPH.

**Keywords :** Antioxidant, *Garcinia mangostana*, Inhibition concentration 50%, Phenolic.

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