

Antioxidant and phytochemical study on pengolaban (*Litsea garciae*), an edible underutilized fruit endemic to Borneo

Abstract

Litsea garciae, known locally in Sabah, Malaysia as Pengolaban, is an underutilized edible fruit endemic to Borneo. This study was conducted to determine the antioxidant activity and total phenolic, total flavonoid, and total anthocyanin contents of different parts (i.e., flesh, stem cap, and seed) of the fruits. All samples were freeze-dried and extracted using 80% methanol and distilled water. For 80% methanol extract, stem cap of pengolaban displayed the highest free radical scavenging activity and ferric reducing activities as compared to other parts of the fruit. Total phenolic and total flavonoid content were highest in stem cap with the values of 8.29 ± 0.70 mg gallic acid equivalents/g and 6.90 ± 0.61 mg rutin equivalents/g, respectively. Total anthocyanin content was highest in flesh of the fruit with the value of 4.12 ± 0.10 mg cyanidin-3-glucoside equivalents/100 g. The same trend of antioxidant and phytochemical content were also observed in the distilled water extract. These findings suggested that pengolaban has an acceptable high amount of phytochemicals which has a potential as natural antioxidant that can contribute to human health.