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Screening of Phytochemical and Biomedical Effects of some Selected *Psidium sp* Leaf Ethanol Extractions

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Psidium sp leaves have traditionally been used to manipulate several diseases over the last decades. Exploring the potential bioactive metabolites from fruit plant leaves has widely increased. There are many approaches carried out to discover the bioactive compounds present in fruit plants and their parts. In this study, three different *Psidium* species, including *Psidium guineanse, Psidium guajava,* and *Psidium cinereum* leaves were subjected to ethanol extraction and the phytochemical analysis by total polyphenolic content (TPC) and total flavonoid content (TFC) assays was evaluated. Anti-α-amylase, and radical scavenging activity by oxygen radical absorbance capacity (ORAC), ferric reducing antioxidant power (FRAP), and DPPH assays were performed to screen the bioactivities**.** Among the extracts, *P. guajava* showed the highest TFC (7.33±1.92 mg quercetin equivalent/g), and *P. guineanse* showed the highest TPC (240.75±77.58 mg GAE/g of extract) compared to other extracts. In addition, *P. guajava* leaf ethanol extract showed the highest DPPH (93.05±0.85 mg Trolox equivalent/g of extract), ORAC (1.04±0.05 µg Trolox Equivalent/g of extract), and FRAP (256.85±48.15 mg Trolox equivalent/g of extract) radical scavenging activities, respectively. α-amylase inhibitory activity of *P. guajava* has resulted in the highest (IC_{50} of 0.975 mg/mL) compared to other extracts followed by the highest yield (14.33%). Collectively, the ethanol leaf extracts of *P. guajava* were determined with high phytochemicals such as polyphenolics, radical scavenging, and anti-α-amylase activity compared to the other extracts. However, further research to evaluate *in vitro* toxicity is considered.

Keywords: *Psidium guineanse, guava leaves, anti-α-amylase, antioxidant activity*