

## ANALYSIS OF PHENOLIC CONTENT AND ANTIOXIDANT ACTIVITY IN *Anacardium occidentale* LEAVES.

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### ABSTRACT

*Anacardium occidentale* (*A. occidentale*) young leaves are consumed traditionally as part of a southeast Asian diet. The regular consumption is believed to have beneficial effects on health in general and potentially against type 2 Diabetes mellitus due to its high content of polyphenols. The aim of this study was to investigate the polyphenol content of the plant using two methanol extracts; Free Phenolic Extract (FPE) and Bound Phenolic Extract (BPE) as well as highlight the presence of six phenolic acids and flavonoids namely; gallic acid, sinapinic acid, caffeic acid, quercetin, ferulic acid and kaempferol using High performance liquid chromatography-photodiode array (HPLC-UV-Vis). The total polyphenols and flavonoids content were also measured which showed high amounts of total polyphenols in BPE with 8.5 mg GAE/g as well as high amounts of total flavonoids in both extracts FPE and BPE with 0.86-0.9 mg QE/g respectively. The presence of these polyphenols was further confirmed by measuring the antioxidant activity through the scavenging of the free radical DPPH, which showed the high antioxidant percentage for both extracts. These findings confirm the importance of *A. occidentale* as a rich source of polyphenols which can be further investigated to determine its effects on non-communicable diseases such as type 2 diabetes.

**Keywords:** *Anacardium occidentale*, Phenolics acids, Flavonoids, HPLC, antioxidants.

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