ANTIBACTERIAL AND ANTIOXIDANT ACTIVITIES OF THE LEAVES CRUDE EXTRACTS OF *Garcinia mangostana* LINN

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ABSTRACT

ANTIBACTERIAL AND ANTIOXIDANT ACTIVITIES OF THE LEAVES CRUDE EXTRACTS OF *Garcinia mangostana*

This study was undertaken to find the antibacterial and antioxidant activities from crude extracts of *Garcinia mangostana* leaves. Cold extraction technique was used in order to get the crude extract by using petroleum ether, chloroform and ethanol as solvents. The crude extracts then investigated for separation in Thin Layer Chromatography (TLC) analysis. The best solvent systems for three crude extracts were mixture of chloroform and dichloromethane. It shows the best separation for the three crude extracts. Antibacterial activity was conducted by using Gram positive bacteria (*Bacillus subtilis and Staphylococcus* aureus) and Gram negative bacteria (*Escherichia coli and Salmonella typhi*,). Petroleum ether and ethanol extract showed active inhibition against four bacteria while chloroform extract active only at *Bacillus subtilis*. The total antioxidant assay was conducted by using 2,2-diphenyl-1-picrylhydrazyl (DPPH). Ethanol extract showed highest inhibition percentage among the crude extracts. Ethanol extract exhibited significant scavenging activity when compared to ascorbic acid indicates its potential as antioxidant.