MARA UNIVERSITY OF TECHNOLOGY

THE STUDY OF ANTIOXIDANT ACTIVITY OF BANANA SOFT PITH (*MUSA ACUMINATA*)

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ABSTRACT

Antioxidants are very useful in the treatment of many human diseases such as cancer, cardiovascular diseases and inflammatory diseases as it reduce the oxidative stress in cells. This study showed the antioxidant potential of extracts from the banana soft pith, *Musa Acuminata.* Several assay such as a 1,1-diphenyl-2-picrylhydrazyl (DPPH) radical scavenging assays and Folin-Ciocalteu method were conducted to determine the antioxidant activity of the samples. The result showed that there was a strong correlation between total phenolic content and total antioxidant activities. The aqueous extract showed higher antioxidant activity than the methanolic extracts and there was a significant difference between both extracts. At 20mg/mL, both methanol and aqueous extracts of banana soft pith showed DPPH scavenging effect by 58% and 64% respectively. Besides, aqueous extract showed higher total phenolic content compared to the methanol extract of banana soft pith with 19ug GAE/mg and 27ug GAE/mg sample respectively at 1mg/ml concentration. The possible mechanisms underlying this effect are due to its higher quantity of phenolic content and water holding capacity. There are many other method can be done to elucidate its content of effective antioxidant such as malondialdehyde (MDA), thiobarbituric acid-reactive-substances (TBARS) and others. Future lines of research could find the use of banana soft pith extracts in other pharmacological aspect.