The Evaluation of Antioxidant Activity of Aloe Vera (Aloe barbadensis miller)

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Abstract : Introduction: Aloe vera (Aloe barbadensis miller) flowers are carried in a large candelabra-like flower-head. Aloe barbadensis miller has been known as a traditional herbal medicine for the treatment of many diseases and sicknesses mainly for skin conditions such as sunburns, cold sores and frostbite. It is also used as a fresh food preservative. The main objective of this study is to determine the antioxidant activity of Aloe barbadensis miller. Methodology: The plant material (3g) was separately extracted with 30 mL of solvent with varying polarities (methanol and ethyl acetate)(technical grade, Merck) in 50ml polyester centrifuge tubes. The tubes was be shaken for 30 minutes on a linear shaker and left over night. The supernatant was filtered using a Whitman No. 1 filter paper before being transferred into pre-weighed glass containers. The solvent was allowed to evaporate under a fan in a room to quantify extraction efficacy. The, tin layer chromatography(TLC) plates were prepared and Pasteur pipette was used for spotting each extractant (methanol and ethyl acetate) on the TLC plates and the plate was developed in saturated TLC tank .and dipped in vanillin sulphuric acid mixture and heated at 110 to detect separate compound .and dipped in DDPH in methanol to detect antioxidant. Expected contribution to knowledge: It was observed that different compounds which interact differently with different solvent such as methanol, ethyl acetate having difference polarities were observed. The yellow spots also observed from the plate dipped in DDPH indicate that Aloe barbadensis miller has antioxidant.

Keywords : antioxidant activity, Aloe barbadensis miller, tin layer chromatography, DDPH
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