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# Evaluation of antioxidant potential of aloe vera (*Aloe barbadensis miller*) extracts.

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## Abstract

The polysaccharide and flavonoid concentrations of two-, three-, and four-year-old Aloe vera were determined, and their antioxidant activities were evaluated compared to BHT and alpha-tocopherol by the DPPH radical scavenging method and the linoleic acid system at 100 microg of soluble solids per mL of ethanol.

The results showed that three-year-old Aloe vera contained significantly higher levels of polysaccharides and flavonoids than two- and four-year-old Aloe vera, and no significant differences in flavonoid levels were found between three- and four-year-old Aloe vera.

All the aloe extracts showed significant antioxidant activity. The antioxidant activity of Aloe vera extracts and reference compounds followed the order: three-year-old Aloe vera > BHT > four-year-old Aloe vera > alpha-tocopherol > two-year-old Aloe vera.

The three-year-old extract exhibited the strongest radical scavenging activity of 72.19%, which is significantly higher than that of BHT at 70.52% and alpha-tocopherol at 65.20%.

These data suggest that the growth stage plays a vital role in the composition and antioxidant activity of Aloe vera.

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