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THE ANTIOXIDANT ACTIVITY OF THE EXTRACT OF AFRICAN LEAVES (VERNONIA AMYGDALINA) USING 1,1-DIPHENYL-2- PICRYLHYDRAZYL (DPPH) METHOD

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ABSTRACT

This study was conducted to test the antioxidant activity of African's leaves(Vernonia amygdalina) using free radical method of 1,1-Diphenyl-2- picrylhydrazyl (DPPH). Isolation of active compound African's leaves was carried out by extraction, maceration and fractionation. The phytochemical testing shows the existence of flavonoids, alkaloids, quinone, saponin, monoterpenes and sesquiterpenes. Extracts used are ethanol extract, acid fraction, dichloromethane fraction with concentration of variations of 10, 20, 50, 100, 200, 500, and 1000 ppm. Analysis of the activity of the test material was done by measuring the absorbance of the sample data (percent inhibition) at a wavelength of 515 nm. These results indicate the existence of significant differences in antioxidant activity in Ethanol extract ($p = 0.000 < \alpha = 0.05$, H_01 is rejected), acid fraction ($p = 0.000 < \alpha = 0.05$, H_02 is rejected) and dichloromethane fraction ($p = 0.000 < \alpha = 0.05$, H_03 is rejected). The result of this study also shows that there was significant differences in antioxidant activity between the three types of extract used ($p = 0.000 < \alpha = 0.05$), variations concentration ($p = 0.000 < \alpha = 0.05$) and the interaction between types and variations in the concentration of the extract ($p = 0.000 <$ = 0.05, H_04 is rejected). Duncan's Multiple Range Test showed that acid fraction, has the highest contribution to the significance of the antioxidant activities followed by ethanol extract and dichloromethane fraction.

Keywords: Vernonia Amygdalina, Antioxidant, DPPH