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Synthesis, Characterization and Anti-Oxidant activity of Azetidinone Derivatives

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ABSTRACT

The research work involves the synthesis of a novel N- Substituted-1, 3, 4-oxadiazol-2-yl)-3-chloro-4-phenylazetidinone (a-e) derivatives. The aim of present study was to evaluate antioxidant activity of azetidinone derivatives by DPPH free radical scavenging method. Azetidinone derivatives were evaluated for the scavenging effects on the DPPH radical and were evaluated. DPPH is a stable free radical that can accept hydrogen radical or an electron and must thus be converted to a stable diamagnetic molecule. DPPH has an odd electron and so has a strong absorption band at 517 nm. When this electron becomes paired off, the absorption decreases stoichiometrically with respect to the number of electrons or hydrogen atoms taken up. Such a change in absorbance by this reaction has been extensively adopted to test the capacity of several molecules to act as free radical scavengers The results were compared with the standards and it shows azetidinone derivatives compounds(a–e) (67.14, 62.06, 64.69, 62.19, 67.13, and 70.07%) exhibited good radical scavenging activity at concentrations 100 µg/mL.

Key Word: *Anti oxidant activity, azetidinone derivatives, DPPH.*