

# Phytochemical screening and evaluation of antioxidant activity of methanolic extract of Kenyan *Hydnora abyssinica* A. Braun (Hydnoraceae)

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## Abstract

*Hydnora abyssinica* is a leafless medicinal herb characterized by rhizome and flower only. The decoction of the rhizome has been used in Kenya to manage infections, cancer and removal of retained placenta. Plant secondary metabolites that exhibit antioxidant activity are well documented and include mainly the phenolics. The objective of this study was to carry out phytochemical screening and investigate the antioxidant activity of the methanol extract of *H. abyssinica* rhizome. The extract was prepared by maceration. Phytochemical screening was done by standard methods and *in vitro* antioxidant activity was evaluated using 1,1-diphenyl-2-picrylhydrazyl (DPPH) scavenging assay. Phytochemical studies revealed presence of alkaloids and glycosides which are reported for the first time being characteristic of this plant while tannins, phenols, steroids, flavonoids, terpenoids and fatty acids confirms reports of other similar studies on the Sudanese *Hydnora abyssinica*. Saponins, volatile oils and coumarins were not present in both the rhizome and flowers. DPPH free radical scavenging activity of the rhizome methanolic extract showed potential antioxidant activity with IC<sub>50</sub> values of 26.7 µg/ml compared with that of 29.3 µg/ml for L-ascorbic acid standard. Activity of the methanolic extract may be associated with the presence of a number of varied classes of phytochemicals. This study

perhaps pave way for further studies to provide data that would validate its medicinal uses and focus on bioassay guided fractionation and isolation of active compounds from its extracts.

**Key words:** Radical scavenging activity, DPPH, Maceration, Phytochemical screening