

In vitro Evaluation of Antioxidant Activities of *Swertia chirayita* Linn.

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Abstract—Antioxidants are the substance that when present in low concentrations compared to those of an oxidisable substrate significantly delays or prevent that oxidation of substance. Generation of free radicals occurs (reactive oxygen species) during metabolism and activities. The antioxidant capacity of a biological system gives rise to oxidative stress which is primary cause of most of diseases and its prevalence. In this study, we evaluated the antioxidant potential of *Swertia chirayita* leaf extracts. The antioxidant activity of leaf extracts *S.chirayita* Linn.(in solvent chloroform, diethyl ether, methanol) was estimated by using free radical scavenging assay (DPPH) and ferric reducing antioxidant potential (FRAP). The methanolic extracts of *S.chirayita* shows significant free radical scavenging ($p<0.0001$) as compared to other solvents. The methanolic extract *S.chirayita* leaves significantly increase the reduction of ferric ions in FRAP assay. Our results highlighted *S.chirayita* as a rich source of natural antioxidants that could be useful in preventing oxidative stress, inflammation which is major cause of the several disease including neurodegenerative disorders.

Keywords: Antioxidant, radical scavenging, oxidative stress, inflammation.