

Estimation of Total Flavanoid Content and in-Vitro Antioxidant Activity of Some Indian Medicinal Plants

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Abstract

Objective: Extract preparation and evaluation of anti oxidant activity of four medicinal plants *Moringa olifera*, *Ocimum sanctum*, *Terminalia arjuna* and *Ficus religiosa*.

Methods: Four plants *Moringa olifera*, *Ocimum sanctum*, *Terminalia arjuna* and *Ficus religiosa* were used in the present study. Bark of *Ficus religiosa* and *Terminalia arjuna* and leaves of *Moringa olifera* and *Ocimum sanctum* were collected from Delhi and NCR region and identified by a botanist. Ethanolic extract of Arjuna and Moringa was prepared using rotary evaporator while aqueous extraction was done for *Ocimum sanctum* (tulsi) and *Ficus religiosa* (peepal). Mayer's test was done for alkaloid estimation and aluminium chloride and potassium acetate was used as reagents to test the presence of flavanoid in these plants. Folin-Ciocalteu reagent was used to estimate the total phenolic content. DPPH was used to determine the *in-vitro* antioxidant activity of all four plants.

Result: Phytochemical analysis revealed the presence of several phytochemicals viz. phenol, flavanoid, alkaloids and steroid in all four plants. Different concentrations (250, 500 and 1000 μ l) of extract of these plants were used for *in-vitro* antioxidant activity. Out of all these concentrations highest activity was observed in 500 μ l. Tulsi extract exhibited highest anti oxidant activity (92.4%) followed by Arjuna(87.68%) , Moringa(68%) and peepal(21.6%).

Conclusion: The results of present study suggest that bark of *Ficus religiosa* and *Terminalia arjuna* and leaves of *Moringa olifera* and *Ocimum sanctum* possess potent antioxidant activity. All plants studied here can serve as a good source of natural antioxidants. Further study can be done to identify the chemical compounds responsible for antioxidant activity.