

Phytochemical Analysis and Evaluation of the Medicinal Herb, *cosmos caudatus kunth.* for Invitro Antioxidant Activities

Pradhnya Khapekar

Department of Botany, Jagadamba Mahavidyalaya Achalpur, Distric Amravati 444 806

Abstract: *Cosmos caudatus kunth* belongs to the family asteraceae and is also a popular garden plant. It is an annual herb 1-8 ft tall. Leaf stalks are 1-7 cm long, leaves are 10-20 cm long and dissected. This plant is supposed to be edible. It mostly flowers from June to November. *Cosmos caudatus* has been spread to many countries over the world indicating that it has a beneficial attribute. Despite this *C. caudatus* is only being used in traditional and alternative medicine. The aim of this review is to analyse qualitative and quantitative phytochemical analysis of this species and evaluate in vitro antioxidant properties of *cosmos caudatus kunth.* From this study it can be concluded that the species of *cosmos caudatus* it exhibits the presence of alkaloids, total phenolics total flavonoids, tannins, saponins in considerable quantity and the species also has an effective potential to be a powerful antioxidant.

Keywords: *Cosmos caudatus*, Phytochemical Analysis, Invitro Antioxidant Activities, etc.

REFERENCES

- [1] Andarwulan, N., R. Batari, D.A Sandrasari, B. Bolling and H, Wijaya, 2010. Flavonoid activity of vegetables from Indonesia. Food chemistry, 121 (4): 1231-1235.
- [2] Blois MS. Antioxidant determination by the use of a stable free radical nature. Nature 1958; 181: 1199-1200.
- [3] Elgorashi EE, Van Staden J. Pharmacological screening of six Amaryllidaceae species. J Ethnopharmacol 2004; 90: 27-32.
- [4] Makkar HP, Siddhuraju P, Becker K. Methods in molecular biology: plant secondary metabolites. Totowa: Human Press; 2007, p. 93-100.
- [5] Obadoni BO, Ochuko PO. Phytochemical studies and comparative efficacy of the crude extracts of some homeostatic plants in Edo and Delta States of Nigeria. Glob J Pure Appl Sci 2001; 8(2): 203-208.
- [6] Paulsamy S, Jeeshna MV. Preliminary phytochemistry and antimicrobial studies of an endangered medicinal herb *Exacum bicolor* Roxb. Res J Pharm Biol Chem Sci 2011; 2(4): 447-457.
- [7] Rafat, A, K. Philip and S. Muniandy. 2010. Antioxidant potential and phenolic content of ethanolic extract of selected Malaysian plants. Research journal of Biotechnology, 5(1): 16-19.
- [8] Shah R, Kathad H, Sheth R, Sheth N, In vitro antioxidant activity of roots of *Tephrosia purpurea* Linn. Int J. Pharm Sci 2010; 2(3): 30-33
- [9] Thambiraj J, Paulsamy S. In vitro antioxidant potential of methanol extract of the medicinal plant, *Acacia caesia* (L.) Wild. Asian Pac J Trop Biomed 2012; 2(Suppl 2): S732-S736.
- [10] Siddhuraju P, Becker K. Antioxidant properties of various solvent extracts of total phenolic constituents from three different agroclimatic origins of drumstick tree leaves. J. Agric Food Chem 2003; 51 (8): 2144-2155.
- [11] Siddhuraju P, Manian S. The antioxidant activity and free radical scavenging capacity of dietary phenolic extracts from horse gram (*Macrotermoloma uniflorum* Lamseeds. Food Chem 2007. 105 (3): 950-958.
- [12] Vishnu R, Nisha R. Jamuna S, Paulswamy S. Quantification of total phenolics and flavonoids and evaluation of in vitro antioxidant properties of methanolic leaf extract of *Tarenna asiatica*- an endemic medicinal plant species of Maruthamali hills, Western ghats, Tamilnadu J Res Plant Sci 2013, 2(2): 196-204.

- [13] Sulaiman, S.F., and A.A.B. Sajak, K.L. Ool, Supriatno and E.M.Seow. 2011. Effect of solvents in extracting polyphenols and antioxidants of selected raw vegetables, Journal of Food Composition and Analysis, 24(4-5): 506-515.
- [14] Makris, D. P. And J.T. Rossiter, 2002. Effect of natural antioxidants on heat-induced, copper (ii) catalysed, oxidative degradation of quercetin and rutin (Quercetin-3-o-Rutinoside) in aqueous model system. J. Sci. Food Agric., 82: 1147-1153.