International Journal of ChemTech Research
CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.10 No.13, pp 324-332, 2017

Evaluation of Antioxidant and Antidiabetic capacity of plant *Boehmeria rugulosa* Bark

Anchal[1]*, Abha shukla[1], R.K. Shukla[2] and Ritu tyagi[1]

[1]Department of chemistry, Kanya gurukula campus, Gurukula Kangri Vishwavidyalaya, Haridwar, Uttarakhand, India
[2]Department of Chemistry, Gurukula Kangri Vishwavidyalaya, Haridwar, Uttarakhand-249407, India

Abstract: In the present study, phytochemical screening, antioxidant and antidiabetic activities of different solvent extracts of Boehmeria rugulosa bark investigated. Successive extraction was carried out with different solvents (petroleum ether, acetone, ethyl acetate and ethanol), using Soxhlet extractor. These extracts were screened for the presence of chemically active compounds by standard methods. The results revealed the presence of saponins, tannins, flavonoids, sugars, terpenoids etc. Among the various extracts acetone has highest Total phenolic content (TPC) (709.931±0.174mg GAE/g dw). Results indicates that the acetone extract of bark exhibit the efficient 1, 1-diphenyl-2-picrylhydrazyl (DPPH) (6.832±0.677µg ml^{-1}) and highest Ferric reducing antioxidant power (441.21±1.499 µM/ml, FRAP value =2.157). Acetone extract of boehmeria rugulosa bark also possessed the significant inhibition activities on α-amylase (668.547±0.02 µg ml^{-1}) and α-glucosidase (691.546±1.466 µg ml^{-1}) enzyme. All extracts exhibited outstanding antidiabetic as well as antioxidant activity. Therefore, the results indicates that the Boehmeria rugulosa bark can served as potential antioxidant as well as antidiabetic agent in food and pharmaceutical industries.

Keywords : Urticaceae, Boehmeria rugulosa, phytochemical, phenolic content, DPPH, FRAP, alpha glycosidase, Alpha amylase etc.

*****