Phytochemical Analysis and Qualitative HPTLC of Ethanolic Extract and its Methanolic Fraction from Aerial Parts of Pennisetum Purpureum

Sadhana Yadav[*], Shradhanjali Singh

United Institute of Pharmacy, Prayagraj

[*]Corresponding Author

ABSTRACT

Pennisetum Purpureum belongs to the family Poaceae. A wide range of health benefits have been attributed to its various parts such as in the treatment of dysentery, fever, abdominal pain. Root decoction of this plant is traditionally used in treatment of blennorrhoea, buccal infection, and gingivitis, and thrush, diuretic, laxative and anti-arthritic activity. Phytochemical screening of the ethanolic extract of the plant's aerial parts shows the presence of flavonoids, alkaloids, tannins, and phenol. Phytochemical screenings show the presence of flavonoids which is responsible for antioxidant activity which can be utilized for anti-diabetic evaluation on Wistar rats. Ethanolic extract and its various fractions revealed the presence of reducing sugars, steroids, glycosides, and flavonoids. Flavonoids-Anthocyanin, present in this plant has antioxidant activity which might act as immunity booster in treatment of Covid-19 symptoms.

Material and methods: Extraction of the plant's aerial parts using 50% ethanol was performed. Fractionation of the plant extract using methanol was done.

Conclusion: Phytochemical screening of Pennisetum Purpureum plant extract contains many significant chemical constituents as flavonoids, tannins, steroids, saponin set which codes for numerous pharmacological actions. This plant possesses various activities such as anti-fungal, anti-diabetic, antioxidant, and cytotoxic activity. Phytochemical screening and thin layer chromatography of the plant extract revealed the presence of flavonoids which possess antioxidant activity which might be used in evaluation of anti–diabetic as well as in covid-19 symptoms treatment.

Keywords: Pennisetum Purpureum, phytochemical screening, fraction, flavonoids, anti-diabetic.