



RESEARCH PAPER

Phytochemical and anti-oxidant analysis in *Pandanus tectorius* of Andaman and Nicobar Islands

I. Jaisankar*, B. Augustine Jerard, Prabhu Pari¹, T. Subramani, Hari Nivas Asokan and E. Manasseh Moses²

Division of Natural Resource Management, ICAR-Central Island Agricultural Research Institute, Port Blair, Andaman and Nicobar (Islands) India (Email : i.jaisankar@icar.gov.in)

Abstract : *Pandanus tectorius* belongs to Pandanaceae family distributed all around benefitting the life of people nearby which could be well picturized among the tribals of Andaman and Nicobar Islands in the way that the plant parts have outstanding medicinal properties whereas the thatched leaves were used for roof construction, bags and hats. The medicinal property may be due to the presence of certain phytochemicals and antioxidants. In this degree, studying the nutritional, anti-nutritional and physicochemical properties with propounded antioxidant activities in the leaf and fruit parts of *P. tectorius* collected from three different locations of Andaman and Nicobar Islands came up with flourishing information that the pulp had significantly high carbohydrate ($20.073 \pm 0.043\%$), ascorbic acid ($4.080 \pm 0.026\%$), phenols ($2.667 \pm 0.039\%$), flavonoid ($0.359 \pm 0.05\%$), tannins ($5.363 \pm 0.136\%$), oxalates ($0.573 \pm 0.048\%$) and good TSS ($7.413 \pm 0.028\%$) content with added hydroxyl RSA ($88.5 \pm 0.278\%$) and superoxide anion RSA ($78.11 \pm 0.026\%$). The seeds also contained significantly high protein ($12.830 \pm 0.105\%$) and saponin ($6.273 \pm 0.047\%$) content with magnificent DPPH ($97.533 \pm 0.001\%$) activity. The leaves also had good concentration of chlorophyll ($4.89 \pm 0.033 \mu\text{g/g}$) and carotenoids ($8.22 \pm 0.036 \mu\text{g/g}$) revealing that the plant parts of *P. tectorius* of Andaman and Nicobar Islands have potent antioxidant and anti-cancer properties standing as a better nutritional initiative.

Key Words : *Pandanus tectorius*, Nutritionals, Anti-nutritionals, Physicochemicals, Antioxidants

View Point Article : Jaisankar, I., Augustine Jerard, B., Pari, Prabhu, Subramani, T., Asokan, Hari Nivas and Manasseh Moses, E. (2025). Phytochemical and anti-oxidant analysis in *Pandanus tectorius* of Andaman and Nicobar Islands. *Internat. J. agric. Sci.*, **21** (1) : 158-169, DOI:10.15740/HAS/IJAS/21.1/158-169. Copyright@2024: Hind Agri-Horticultural Society.

Article History : Received : 20.10.2024; Revised : 23.11.2024; Accepted : 26.12.2024

***Author for correspondence:**

¹Field crops and Improvement Section, ICAR-Central Island Agricultural Research Institute, Port Blair, Andaman and Nicobar (Islands) India

²Department of Environment and forest, Andaman and Nicobar Administration, Port Blair, Andaman and Nicobar (Islands) India