

Pharmacognosy, Phytochemistry & Natural Products

October 26-28, 2015 Hyderabad, India

Physicochemical properties of ethno-medicinal plant *Hygrophila auriculata* and *Paederia foetida* leaves grown in herbal kitchen garden

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Medicinal plants have been used in pharmaceutical practices for thousands of years. India has a wide range of biodiversity and due to its tropical climate which can support large number of ethno-medicinal plant. *Hygrophila auriculata* and *Paederia foetida* are such ethno-medicinal plant. *H. auriculata* is an aquatic perennial herb with spine and *P. foetida* is a climber which has ovate to lanceolate leaves. As both the plant has wide medicinal values, people and tribes of local area of these plant use their leaves in their diet, the plants with root were collected from the marshy land of West Bengal and grown in herbal kitchen garden at Jhansi, which has semi-arid tropical climate. Physical properties of leaves were measured, processed and analyzed for proximate principles as well as fiber fractions. Leaf length, width and petiole length was 6.60 ± 0.17 , 2.98 ± 0.18 and 1.86 ± 0.19 cm for *P. foetida* and 5.49 ± 0.17 , 1.21 ± 0.11 and 0.49 ± 0.11 cm for *H. auriculata*. Dry matter of leaves was 23.04 and 16.98%, in the leaves of *P. foetida* and *H. auriculata*. On dry matter basis, nitrogen content found to be 2.12 and 4.11% with calculated crude protein 13.24 and 25.67%, in the leaves of *P. foetida* and *H. auriculata*. ADF, NDF, lignin, were 29.30, 39.23 and 9.81%, in *P. foetida* leaves and 16.89, 28.95 and 4.68%, in *H. auriculata* leaves. Ether extracted oils was 5.95 and 12.28%, in the leaves of *P. foetida* and *H. auriculata*. Ash content which mainly constitutes the minerals was 9.93 and 20.55% in *P. foetida* and *H. auriculata*. Nutritional values of *H. auriculata* leaves found better than *P. foetida* leaves with more protein, minerals, essential oils with less lignin for better digestability in the system. However, total dry matter and organic matter found more in *P. foetida* leaves. Thus, both *P. foetida* and *H. auriculata*, ethnomedicinal plant can be grown in small kitchen garden maintaining their well-established nutritional quality and daily use in diet as medicinal plant.

Biography

Swastika Maity is currently pursuing BPharm from Manipal College of Pharmaceutical Sciences, Manipal University, Karnataka. She has presented a poster and got the Best Poster Award in Range Management Conference in Kalyani, West Bengal and PharmaQuora 2015.

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