

Proceedings of Jaffna Science Association

Abstracts of Research Papers

Volume: 20 No: 01

Twentieth Annual Sessions 17, 18 & 19 April 2013 Jaffna, Sri Lanka.

Phytochemical Screening of Various Extracts of Root of Withania somnifera (L.) Dunal

S. Vinotha¹, Ira Thabrew² and S. Sivapalan¹

"Unit of Siddha Medicine, University of Jaffna, Sri Lanka.

²Institute of Biochemistry, Molecular Biology and Bio technology, University of Colombo, Sri Lanka.

Withania somnifera (L.) Dunal (Solanaceae), commonly known as Aswagandha, is one of the most valued medicinal plants with a number of pharmaceutical applications. Root extracts of W. somnifera are commonly used as a remedy for variety of ailments and a general tonic for over all health and longevity in the Traditional medicine system. It is also reported to have anti-inflammatory, anti arthritic, antitumor, immunomoduatory and antioxidant effects. Although the phytochemical screening of W. somnifera has been already published, the aim of this study is to compile its phytochemical constituents in various extracts, which were carried out using standard laboratory procedures. Quantification of some of the active constituents like alkaloids, flavonoids and saponins were also carried out. The preliminary phytochemical screening of hot and cold ethanol, methanol and water extracts showed the presence of alkaloids, saponins, flavonoids, steroids, tannins, proteins, reducing sugar and coumarins and absence of quinones or anthraquinones. Cold and hot water extracts indicated the presence of fat and fixed oil. The total alkaloid and flavonoid contents were found to be 0.81 ± 0.01 % and 14.43 ± 0.40 % respectively, and total saponin content was (Foaming Index) FI < 100. The findings are consistent with the presence of biologically active constituents in the polar extracts of W. somnifera.

Keywords: Different extracts, phytochemical screening, root, Withania somnifera

Acknowledgment: HETC Project Funding, JFN/Sidda/N1