



ORAL PRESENTATION

OPEN ACCESS

OA01.18. A quality assessment (physico-phytochemical profile) of root of *Withania somnifera* (L.) Dunal used traditionally for therapeutic purposes in Sri Lanka

Vinotha Sanmugarajah¹, Iranganie Thabrew², Sri Ranjani Sivapalan¹

From 5th World Ayurveda Congress 2012 Bhopal, Madhya Pradesh, India. 7-10 Dec 2012

Purpose:

Withania somnifera (Linn) Dunal is widely used in the traditional medicinal system of Sri Lanka. Quality assessment of root of *W. somnifera*, grown in India has been published [Nasreen and Radha 2011]. However, root of *W. somnifera* used in preparation of traditional medicines in Jaffna District are mainly purchased from local vendors that import it from India. Therefore, it was important to carry out a quality assessment of the plant material available in Jaffna to ensure the authenticity of this plant material and to prevent any adulteration, especially when used in the powdered form.

Materials and Method:

For the quality assessment of root of *W. somnifera*, six samples of this root powder were used and physicochemical parameters such as ash values, loss on drying, pH and extractive values were carried out according to the World Health Organization (WHO) guidelines [Anonymous 1998]. A preliminary phytochemical screening was done to detect different phyto-constituents [Prashant Tiwari et. al, 2011]. All samples were tested and mean values along with standard deviation were recorded.

Result:

It was found that the various physicochemical parameters such as total ash; water soluble ash, acid insoluble ash, sulfated ash, loss on drying and pH

were found to be $5.76 \pm 0.09\%$, $2.93 \pm 0.15\%$, $0.63 \pm 0.04\%$, $1.92 \pm 0.04\%$, $9.12 \pm 0.10\%$ and 5.73 ± 0.02 respectively. The percentage yields of hot-water extractable matter ($30.82 \pm 1.09\%$) were greater than hot-ethanol extractable matter ($10.0 \pm 0.22\%$) of root of *W. somnifera*. The phytochemical screening of hot aqueous and ethanolic extracts showed the presence of alkaloids, saponins, flavonoids, steroids, tannins, proteins, reducing sugar and coumarins and does not showed the presence of quinines or anthraquinones.

Conclusion:

The quality assessment profile of root of *W. somnifera* obtained in the present study to be an immense value in identification and authentication of this plant and may help in preventing its adulteration (particularly when used in the powdered form).

Author details

1. Unit of Siddha Medicine, University of Jaffna, Sri Lanka
2. Institute of Biochemistry, Molecular Biology and Biotechnology, University of Colombo, Sri Lanka

Published: December 2012

Cite this article as: Vinotha Sanmugarajah, OA01.18. A quality assessment (physico-phytochemical profile) of root of *Withania somnifera* (L.) Dunal used traditionally for therapeutic purposes in Sri Lanka, J-AIM 2012, Suppl1