



## Phytochemical screening, total antioxidant activity and quantitative determination of reserpine in *Rauwolfia* spp.

• Shriya • Shahina Perween  
• Hena Naz

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Corresponding Author : Hena Naz

**Abstract :** Position of *Rauwolfia* in pharmaceutical industry is emerging. Reserpine is the first herbal constituent included in modern medicine system. Due to its high demand over the world market the genuine plant is on the track of extinction. Therefore, the present study was attempted to search reserpine from parts of *Rauwolfia serpentina* and *Rauwolfia tetraphylla* other than only roots of the plant. So that different parts of both the species can be explored for the bioactive reserpine and the root of commercial plant *Rauwolfia serpentina* can be minimized from extraexploitation and thus the plant from extinction. The quantitative determination of Reserpine was done by UV-spectrophotometer method. The result showed the presence of reserpine in root alongwith leaf

and stem in both the species. In addition to this, antioxidant activity was measured spectrophotometrically using phosphomolybdenum method. Antioxidant activity was found to be 49.01% for *Rauwolfia serpentina* and 48.1% for *Rauwolfia tetraphylla*. This may be mainly due to the presence of phytochemical flavonoid in the leaf, stem and root.

**Key Words :** UV Spectroscopy, Reserpine, *Rauwolfia serpentina*, *Rauwolfia tetraphylla*.

### Shriya

B.Sc. III year, Botany (Hons.),  
Session : 2011-2014, Patna Women's College,  
Patna University, Patna, Bihar, India

### Shahina Perween

B.Sc. III year, Botany (Hons.),  
Session : 2011-2014, Patna Women's College,  
Patna University, Patna, Bihar, India

### Hena Naz

Assistant Professor, Deptt. of Botany,  
Patna Women's College, Bailey Road,  
Patna – 800 001, Bihar, India.  
E-mail : [henanaz64@gmail.com](mailto:henanaz64@gmail.com)

### Introduction :

Tropical plant *Rauwolfia serpentina* is a small, woody, perennial medicinal shrub. It is a medicinally famous herb in Ayurveda, Siddha, Unani, and Western system of medicines. The International Union for the Conservation of Nature and Natural Resources (IUCN) has assigned an endangered status to *Rauwolfia serpentina*. It has been reported to contain 50 indole alkaloids that are mainly localised in the root bark. Among these alkaloids, reserpine, yohimbine, ajmalicine, ajmaline etc. are the rich source found in the root of *Rau*