**Paper No: PU-SOE- CIVIL – 03**

**Screening, Detection and Quantification of Solasodine in Solanum Pubescens Willd by Reversed-Phase High-Performance Liquid Chromatography Method**

V. N. Sudhamaa, **M. Ramakrishnanb**

a. Research and Development Centre, Bharathiar University, Coimbatore, Tamil Nadu, India, Department

of Botany, Indavara Dodda Siddalinge Gowda Government College, Chikkamagaluru, Karnataka, India

b. Department of Environmental Studies, School of Engineering, Presidency University, Bangalore, Karnataka, India

**Abstract**

Objective: The aim of the study is to extract the solasodine with different solvents from leaf and stem bark of Solanum pubescens and to screen, detect, and quantify using reversed-phase high-performance liquid chromatography (RP-HPLC) methods. Methods: Standard solasodine marker compound and five different solvent extracts made through Soxhlet extraction from leaf and stem bark of S. pubescens were injected (10 μl) to HPLC with C18 reversed-phase column, gradient solvent eluent system, and photo-diode array detector (DAD) under ultraviolet absorbance at 205 nm with flow rate of 1.2 ml/min. a simple formula is adopted to quantify the assay % of solasodine. Results: Standard solasodine marker was detected at a retention time (RT) 21.59 min with the peak area of 5245605 at a wavelength of 205 nm. Among the ten extracted samples, solasodine was detected in leaf methanol extract (RT 21.81 min) and hydro-alcohol leaf extract (RT 21.82 min) with the peak area of 191694 and 246023, respectively. The quantified assay % of solasodine was highest in leaf hydro-alcohol extract (1.857%) followed by leaf methanol extract (1.447%). In the remaining eight extracts, solasodine was not detected. Conclusion: The present study findings are the first report with accuracy and simple assay method for extraction, screening, detection, and quantification of solasodine using RP-HPLC from S. pubescens.

**Keywords:**

Glycoalkaloid, Gradient solvent, Reversed-phase high-performance liquid chromatography, Solanum pubescens, Solasodine

**Publication Details:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Journal Name** | **Vol.** | **Month & Year** | **Page No.** | **Publisher** | **Scimago Ranking** |
| International Journal of Green Pharmacy (IJGP) | 13(4) | Oct. 2019 | 343 | Medknow Publications | Q3 |