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

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**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

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