

A Comprehensive Review on Analytical Methods of Rifampicin

Abhishek Sorde¹ and Prof. Sharvari Chavan²

Department of Quality Assurance

Abhinav Education Society's College of Pharmacy, Narhe, Pune

Abstract: *Rifampicin, a cornerstone in the treatment of tuberculosis and other bacterial infections, necessitates robust analytical methods for its accurate determination in pharmaceutical formulations and biological matrices. This review aims to provide a comprehensive summary of the analytical methods developed and validated for rifampicin quantification, encompassing various chromatographic, spectroscopic, and other analytical techniques reported in the literature. The review begins with an overview of the physicochemical properties, pharmacological significance, and regulatory requirements pertinent to rifampicin analysis. Additionally, the review highlights the importance of method robustness, specificity, sensitivity, and stability-indicating capability in ensuring the quality and safety of rifampicin-containing formulations. Overall, this review serves as a comprehensive reference for researchers, analysts, and regulatory authorities involved in the development, validation, and quality control of analytical methods for rifampicin, facilitating the advancement of pharmaceutical sciences and therapeutic interventions aimed at combating infectious diseases effectively.*

Keywords: Rifampicin, Mechanism of action, UV-visible spectroscopy, HPLC, LC-MS/MS, HPTLC.