

# A Review on Extraction, Isolation and Separation Technique Studies of *Musa Acuminata*

Chede Sayali, Badhekar Monika, Bhagat Suhani, Vaid Harshda, Ms. Prachi N. Padwal  
Samarth Institute of Pharmacy, Belhe, Maharashtra, India

**Abstract:** *Banana leaves are a rich source of bioactive compounds, including glycosides, alkaloids, and phenolics, which have been reported to possess various pharmacological activities. However, the efficient extraction, isolation, and separation of these compounds from banana leaves remain a significant challenge. This review aims to provide a comprehensive overview of the existing extraction, isolation, and separation techniques employed for the recovery of bioactive compounds from banana leaves. The reviewed techniques include solvent extraction, microwave-assisted extraction, ultrasound-assisted extraction, supercritical fluid extraction, and chromatographic separation methods. The advantages, limitations, and potential applications of each technique are discussed. Furthermore, the review highlights the need for the development of more efficient and sustainable extraction and separation methods to fully exploit the therapeutic potential of banana leaf bioactives.*

**Keywords:** banana leaves, extraction methods, antioxidants, bioactive compounds, Medicinal Plants