

ABSTRACT

This study explores the synergy between Ayurvedic Varnya herbs and modern pharmaceutical insights, focusing on their tyrosinase inhibition potential for skin complexion improvement. Varnya Dravyas, crucial in Ayurveda, are believed to enhance skin tone. Investigating 50 herbal extracts, the research highlights superior inhibition of tyrosinase in 4 herbal extracts. The study translates preclinical findings into clinical applications, emphasizing the need for safer depigmentation alternatives.

Chapters 2 and 3 detail the work plan, emphasizing RP-HPLC and HPTLC methods for Varnya herb quality evaluation. Phenolic compounds serve as essential markers, and the study successfully validates these methods, offering robustness in herbal raw material quality control.

Chapter 4 substantiates the tyrosinase inhibition potential of selected Varnya herbs, identifying glycyrrhizin, quercetin, ferulic acid, and chlorogenic acid as significant contributors. Chapter 5 focuses on formulating Varnya cream, combining tyrosinase-inhibiting herbs with various excipients, resulting in stable formulations with promising skin-whitening properties. Notably, Formulation F1 stands out for its stability and desirable characteristics. Chapter 6 highlights the tyrosinase inhibiting property of traditional ayurvedic oil- Kumkumadi tailam.

This research provides a comprehensive understanding of Varnya herbs' tyrosinase inhibition potential, paving the way for their application in skin care formulations. The study underscores the importance of bridging traditional knowledge with modern scientific methods for effective and safe skincare solutions.