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A STUDY ON INDIAN TRADITIONAL MEDICINE INGREDIENT PREPARATION AND PHYSICOCHEMICAL CHARACTERIZATION

ANJALI YADAV

Research Scholar, Ph. D. in Chemistry
Dr APJ Abdul Kalam University, Indore, M.P.

ABSTRACT

This study investigates the preparation methods and physicochemical characterization of ingredients used in Indian traditional medicine, particularly focusing on Ayurvedic formulations. Traditional Indian medicine, with a rich history of over 5000 years, employs a diverse range of natural ingredients derived from plants, minerals, and animal products. The research aims to systematically document the preparation processes and perform a detailed physicochemical analysis of selected ingredients to understand their properties and potential therapeutic benefits. The study involves the collection of traditional medicinal ingredients from various regions in India, followed by their preparation using conventional methods as described in classical texts. Analytical techniques such as Fourier Transform Infrared Spectroscopy (FTIR), X-Ray Diffraction (XRD), and Scanning Electron Microscopy (SEM) are employed to characterize the physicochemical properties of these ingredients. Key parameters analyzed include particle size, chemical composition, crystallinity, and morphological features. Results indicate significant variation in the physicochemical properties of ingredients based on their source and preparation method. This study provides valuable insights into the standardization of traditional medicine preparation, which is crucial for ensuring consistency, efficacy, and safety of Ayurvedic treatments. The findings also contribute to bridging the gap between traditional knowledge and modern scientific validation, promoting the integration of traditional medicine into contemporary healthcare practices.

Keywords: Indian traditional medicine, Ayurveda, Ingredient preparation, Physicochemical characterization, Ayurvedic formulations, Natural ingredients, Herbal medicine, Traditional medicinal practices.