

**A PHARMACOLOGICAL REVIEW OF AYURVEDIC MEDICINAL PLANTS WITH
NATURAL DEODORANT POTENTIAL: A SUSTAINABLE ALTERNATIVE TO
CHEMICAL-BASED FORMULATIONS**

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Deodorants are widely used cosmetic products formulated to mask or prevent body odor caused by microbial activity. However, conventional deodorants often contain harmful chemicals linked to serious health risks. Therefore, for safer and more sustainable personal care products, this review aims to explore medicinal plants described in Ayurveda that exhibit natural deodorant properties. A total of 75 medicinal plants were selected through an extensive literature review, including classical Ayurvedic texts and standard scientific web search engines such as PubMed, ScienceDirect etc. from the last decade. Selection criteria were based on Ayurvedic pharmacological actions aligned with deodorant activity, specifically *Krimighna* (antimicrobial), *Svedapanayana* (antiperspirant), *Kandughna* (anti-pruritic), *Kushtaghna* (beneficial in skin diseases), etc. properties. A grading framework was applied to evaluate each plant's efficacy, accessibility, affordability, likelihood of skin staining, and potential for irritation. Among the 75 reviewed plants, ten plants including *Embelia ribes*, *Vitex negundo*, *Nelumbo nucifera*, *Asparagus racemosus*, *Glycyrrhiza glabra*, *Rubia cordifolia*, were identified as exhibiting the highest potential for natural deodorant application. They predominantly included *Tikta* (bitter), *Madhura* (sweet), and *Kashaya* (astringent) *Rasa*; *Laghu* (light) and *Ruksha* (dry) *Guna*; *Sheeta* (cool) *Veerya*; and *Katu* (pungent) *Vipaka*, with a *Kapha* and *Pitta dosha* pacification. Alkaloids, tannins, terpenoids, flavonoids, saponins, steroids, and cardiac glycosides were found as the phytochemicals and flavonoids and terpenoids were dominant. These compounds are known for their antioxidant, antibacterial, anti-inflammatory, melanin-modulating, DNA protective, and anti- carcinogenic effects. The mechanisms of antiperspirant were found as sweat gland modulation, hormonal pathway interaction and antimicrobial activity, primarily due to bioactive phytochemicals. The integration of Ayurvedic medicinal plants with deodorant properties presents a promising strategy to develop safe, natural, and effective alternatives to chemical-based deodorants. These findings highlight the potential for future novel herbal deodorant formulations.

Keywords: Ayurveda, Natural deodorant, Phytochemicals, Pharmacodynamic properties