

## **Formulation of Deodorant Using Fine Fragrance for Body Odor Control**

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### **Structured Abstract**

**Background:** Body odor (BO) results from bacterial breakdown of sweat, negatively impacting confidence and hygiene perception. Conventional deodorants may cause skin irritation or health risks due to harsh chemicals like aluminium salts. This study aimed to formulate a natural deodorant using Dr Azri's fine fragrance for effective BO control while ensuring skin-friendliness, fragrance longevity, and eco-conscious formulation.

**Methods:** Natural ingredients (cocoa butter, coconut oil, beeswax, arrowroot powder, kaolin clay, cornstarch, baking soda, vitamin E oil) were used with Dr Azri's fragrance oil in various formulations (A–F). Standardized preparation involved melting oils and waxes, incorporating powders, and adding fragrance and vitamin E at controlled temperatures. The formulations underwent organoleptic, pH, softening point, spreadability, stability (under room, refrigerated, and heat conditions), staining, skin irritation, and hedonic tests using volunteer feedback and physical assessments.

**Results:** Among six formulations, Formulation F (without aloe vera) exhibited the best performance, with smooth texture, high fragrance retention, good spreadability, pH 4–5 (skin-friendly), high softening point (56.7°C), and stability under various conditions. Minimal staining was observed, with only faint residue on dark fabrics. No skin irritation was reported across formulations, ensuring safety for sensitive skin. The removal of aloe vera eliminated grainy texture issues observed in previous versions.

**Conclusion:** The study successfully developed a natural, safe, effective deodorant with long-lasting fragrance and user-preferred attributes using innovative perfume technology. The formulation aligns with consumer demand for eco-friendly, aluminium-free, and skin-safe deodorants, presenting potential for commercialization.

**Keywords:** Deodorant, body odor control, natural formulation, fragrance longevity, skin-friendly

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