



# INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

## Formulation And Evaluation Of Herbal Antiperspirant Roll-On Using Natural Extracts

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### Abstract:

The present study focuses on the formulation and evaluation of a herbal antiperspirant roll-on as a safer alternative to conventional synthetic products. Excessive sweating and body odor are commonly caused due to microbial decomposition of sweat. Synthetic antiperspirants containing aluminum salts may lead to skin irritation and other adverse effects, thereby increasing the demand for herbal alternatives. In this study, a herbal roll-on formulation was prepared using sage extract, aloe vera, tea tree oil, and rose oil along with suitable excipients such as Carbopol, glycerin, and camphor. The formulation was evaluated for parameters such as pH, viscosity, spreadability, drying time, washability, and stability. The results indicated that the formulation possessed acceptable physicochemical properties and good stability. The presence of herbal ingredients provided antimicrobial, soothing, and deodorizing effects. The inclusion of rose oil improved fragrance and overall acceptability of the formulation. Hence, the developed formulation can be considered a safe and effective alternative to conventional antiperspirants.

### Keywords:

Herbal Antiperspirant, Roll-On, Sage, Aloe vera, Tea Tree Oil, Rose Oil, Carbopol Gel, Antimicrobial Activity, Deodorant, Cosmetic Formulation

### 1. Introduction:

Skin is the largest organ of the human body and plays an important role in protection, thermoregulation, and excretion. Sweat glands present in the dermis are responsible for perspiration, which helps regulate body temperature. However, excessive sweating (hyperhidrosis) can lead to discomfort and body odor due to microbial activity.

Antiperspirants are used to reduce sweat production, while deodorants help in masking odor. Most marketed formulations contain aluminum salts, which may cause irritation in some individuals. Therefore, there is a growing interest in herbal formulations that are safer, eco-friendly, and skin-compatible.

Natural ingredients such as sage, aloe vera, tea tree oil, and rose oil possess antimicrobial, soothing, and deodorizing properties.

## 2. Materials and Methods:

### 2.1 Materials:

Sage extract, Aloe vera gel, Tea tree oil, Rose oil, Carbopol, Glycerin, Camphor, Distilled water

### 2.2 Method of Preparation:

Step 1: Preparation of Extract

Step 2: Preparation of Gel Base

Step 3: Addition of Ingredients

Step 4: Addition of Oil Phase

Step 5: Final Adjustment

### 3. Evaluation Parameters:

pH determination, Viscosity, Spreadability, Drying time, Washability, Stability studies

### 4. Results and Discussion:

The formulation showed good stability, appropriate pH, and effective antimicrobial activity. Rose oil improved fragrance and acceptability.

### 5. Conclusion:

The herbal antiperspirant roll-on was found to be safe, effective, and stable.

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