

# Development of a Natural Mosquito Repellent Cream Based on Tagetes and Ocimum Sanctum Extracts

<sup>1</sup>Mr. Om Suresh Joshi, <sup>2</sup>Mr. Aadarsh R. Ajmire, <sup>3</sup>Mr. Aditya D. Dudhe,

<sup>4</sup>Mr. Ayush M. Darne, <sup>5</sup>Mrs. Unnati T. Rathod

<sup>1,2,3,4</sup>Students of B-Pharm Final Year

<sup>5</sup>Asst. Professor of (Pharmaceutical Chemistry Dept.)

Ishwar Deshmukh Institute of Pharmacy, Digras, Maharashtra, India

**Abstract:** Mosquito-borne diseases like malaria, dengue, and chikungunya are still major public health issues, especially in tropical and subtropical areas. While synthetic repellents like DEET do a great job at keeping mosquitoes away, using them for long periods can cause skin irritation and harm the environment. To tackle this problem, our study looks into creating and testing a herbal mosquito repellent cream that features marigold (*Tagetes* spp.) oil and tulsi (*Ocimum sanctum*) extract—both of which are known for their ability to repel insects and fight germs. We formulated the cream using an oil-in-water emulsion base, experimenting with different amounts of marigold oil and tulsi extract to find the best mix for effectiveness and skin safety. We assessed the cream's key properties, such as pH, spreadability, viscosity, and stability under various storage conditions. To test its mosquito-repelling power, we used a cage test model with *Aedes aegypti* mosquitoes. The results showed that the cream had good physical properties and could effectively repel mosquitoes for up to 4 hours without causing any skin irritation in patch tests. Stability studies also confirmed that the formulation held up well over a 30-day period. In conclusion, this herbal cream with marigold oil and tulsi extract offers a promising, skin-friendly, and environmentally safe alternative to traditional chemical repellents.

**Keywords:** Mosquito

