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A Review on Herbal Dhoop from Temple Waste for Mosquito Repellent Activity

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Abstract: *Mosquito-borne diseases have become a serious health concern in recent times. Illnesses such as dengue, malaria, and yellow fever are primarily spread by mosquitoes. This research emphasizes the principles of Recycle, Reuse, and Recover (3Rs), which are essential in any waste management process. The study explores the use of marigold waste to produce herbal dhoop. Unlike the many chemical-based mosquito repellents available in the market that harm both humans and the environment, this formulation is developed entirely from natural ingredients and temple flowers.*

The prepared dhoop was evaluated on several parameters, including mosquito-repellent activity, microbiological safety, moisture content, consistency, irritability, burning time, ash value, color, and odor. The central aim of this research is the development and evaluation of a natural, herbal dhoop formulation designed for environmental purification. The study further suggests that with a focused approach and reliance on natural materials, dhoop production could emerge as a promising market in the future.

It was found that the herbal dhoop sticks are more cost-effective, nontoxic, and efficient than commercially available chemical repellents, while also promoting a mosquito-free and healthy environment. Since this formulation is safer, eco-friendly, and prevents insects from developing resistance, it serves as a viable alternative to chemicalbased repellents. The findings highlight that certain plant combinations—such as camphor, neem, tulsi, and marigold—possess strong mosquito-repelling properties without causing irritation, making them safe and environmentally beneficial..

Keywords*:* Herbal Dhoop, Mosquito repellent, Marigold flower, Microbiological evaluation

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