

Sustainable Protection: Innovative Dual-Form Herbal Mosquito Repellent Formulation from Traditional Knowledge

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Abstract: Mosquito borne diseases including malaria, dengue, filariasis, and chikungunya cause serious health hazards across the world. Several mosquito repellents are currently in the market; however, most of these are not efficacious and eco-friendly. Recently, considerable research progress has been made to develop more pleasant, effective, and non-toxic to other species using herbal oils and formulations. Also, these herbal compositions are easily available and economic. Although, this existing herbal composition has been demonstrated to be effective and non-toxic to humans, they are more volatile and short lifespan of these compounds has necessitated further development of plant originated pesticides as alternative to chemical pesticides. In the current study, we have developed the various herbal formulations and showed that these formulations are effective mosquito repellents. The survey further showed that these repellents are pleasant with minimum allergic reactions.

Nowadays, people widely use chemical-based products like room fresheners and disinfectants to clean their surroundings, which may cause harmful effects on health and the environment. To reduce the use of such chemicals, an effort was made to prepare an herbal dhoop using natural ingredients such as tulsi, bael, cow dung, cow milk, clove, and camphor — all known for their purifying and medicinal properties. The prepared dhoop was tested for its antimicrobial activity and was found to be effective in disinfecting the environment. Along with purifying the air, it also showed good mosquito repellent action. Regular use of this herbal dhoop may help prevent various airborne diseases and can be especially beneficial in remote areas, where it can be easily made and used for air sterilization. This research mainly focuses on the preparation and evaluation of this natural and herbal dhoop as a safe and eco-friendly way to cleanse the environment.

Keywords: Dhoopbatti, Mosquito, Disease, eco-friendly, Safe

