

**DEVELOPMENT OF NATURAL MOSQUITO  
REPELLENT COIL USING TEA FLUFF AS A FILLER  
MATERIAL**

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## ABSTRACT

Control of mosquitoes is something of extreme importance in the present day scenario, with increasing number of mosquito borne illnesses due to rising number of the mosquitos. They transmit many deadly diseases such as Dengue, Chikungunya, Malaria etc. Specialty products like mosquito repellents are used to combat mosquitoes are required. Chemical mosquito repellents have a remarkable safety profile, but they are toxic against the skin and nervous system like rashes, swelling, eye irritation, and worse problems, including brain swelling in children, and low blood pressure. Due to its high health risk researchers are making attempts to find out new filler materials and active ingredients which are derived from natural plants. Tea fluff is having the required properties of the filler material. Hence tea fluff is a waste product produced during the secondary manufacturing process of the *Camellia sinensis* and can be utilized as the filler material for the production of the natural mosquito repellent coil. The main objective of this study was to development of natural mosquito repellent coil by using tea fluff as a filler material to provide solution for the waste management in the theme of value addition to the waste products. Citronella (*Cymbopogon* sp.) oil was used as the natural repellent. Suitable tea fluff percentages and the natural repellent oil levels were determine during this study. Final product was endure the flammability test, burning time and mosquito repellency test to check the efficacy of the product with commercially available products.

Key words: Natural mosquito repellent, Tea fluff, Filler material, Citronella, Mosquitoes