DEVELOPMENT OF NATURAL MOSQUITO REPELLENT CREAM USING THE MIXTURE OF ORANGE PEELS, NEEM SEEDS AND ROSEMARY EXTRACT

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ABSTRACT

DEVELOPMENT OF NATURAL MOSQUITO REPELLENT USING THE MIXTURE OF ORANGE PEELS (*Citrus sinensis*), NEEM SEED (*Azadirachta indica*), AND ROSEMARY (*Rosmarinus officinalis L)* EXTRACT

Mosquito-borne conditions pose a significant trouble to global health, and attempts are ongoing to understand their epidemiology, transmission mechanisms, and implicit remedial interventions. The scope of this research is primarily to develop a natural repellent cream based on plant extracts which were orange peels, neemseeds and rosemary and its future potential as a sustainable product. Soxhlet extraction method using n-hexane as solvent was used to extract a mixture of orange peels, neem seeds, and rosemary. The FTIR analysis revealed that the plant materials were compatible with one another and that the peaks of the physical combination were intact and corresponded to the individual compounds. The phytochemical screening has identified the secondary metabolites compounds such as tannins, saponins, and flavonoids that are present in each plant extract. In addition, the prepared repellant cream was evaluated for stability utilizing pH in the range of less acidic to neutral, high spreadability, high moisture content, and not cause all negative reaction in patch test.

TABLE OF CONTENT

CHAPTER 4 RESULTS AND DISCUSSION