



Insect Repellent and Antibacterial Textiles



Problem Statement:

- Worldwide increase of insect born diseases
- Available Insect repellent solutions are toxic and create negative externalities on environment
- Prolonged exposure of chemical-based repellent can cause health issues viz. Asthma, ocular irritation etc.
- Available repellent solutions are expensive and need periodic replacement

Solution:

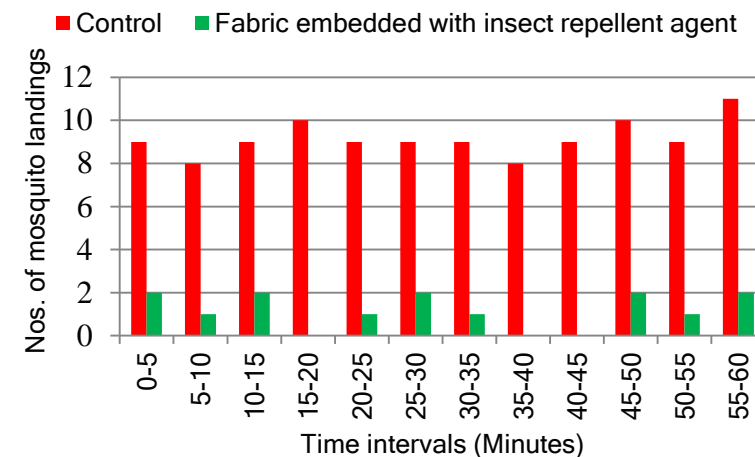
- Development of green chemicals δ -Decalactone (DDL), 2 nonene-4-one, and 6-amyl- α -pyrone (6PP) from waste lignocellulosic biomass
- Application of green chemicals in textiles to impart insect repellence and antibacterial property

Features:

- Antibacterial, Non-toxic, economic, environment friendly and bio renewable
- Durable Repellence effect on textile substrates
- 87% mosquito repellence obtained
- Zero waste generation during manufacturing of repellent solutions

Applications:

- Textiles, clothings and medical protective gears viz. masks, apron, surgery gowns, etc.
- Medical tents, Mosquito nets
- Paints and Sprays
- Floor cleaning liquids



Mosquito repellency cage test results

- Patent Filed in India
- Technology Readiness Level-5

Looking for industrial partners for commercialization