

Project titled

“Development and application of eco-friendly microencapsulated moth repellent and antimicrobial finish for Pashmina product in decentralized sector.”

Point 1: Novelty

- Eco-friendly moth repellent agent developed through microencapsulated technology for pashmina products.
- Currently available products are permethrin based and are toxic to aqua culture.
- 08 Types of novel Eco-friendly moth repellent agent developed through microencapsulated technology for pashmina
- Successfully developed the microcapsules of clove, lavender, thyme, Rosemary, neem, mint, and eucalyptus, cedar wood essential oils were developed.
- Eucalyptus, Rosemary, & Clove microcapsule treated samples were found to give better moth resistance property but the activity was found to be comparable to commercial mothproofing agent like permethrin.

Point 2: Publication & Patent in the project**a. Publication:**

1. M. Basuk, S. Pandit; *Eco friendly microencapsulated moth repellent and antimicrobial finish for Pashmina & Wool fabrics*, paper accepted for publication in **Melliand International**, March 2019 issue
2. M. Basuk & J. Behera, *A review on woolen cloth's moth and its remedies*, **Bangladesh Textile Today**, Vol. 11, Issue 2 March 2018, page 68 -77
3. J. Udakhe, S. Honade, N. Shrivastava, *Fragrance Release and Moth Repellent Activity of Natural Essential Oils*, **Colourage LXI(5):33-38** May 2016

b. Patent:

Patent application reference no. 201821030131 on “Eco friendly microencapsulated moth repellent agents for woollen textiles.”

Point 3: Commercialization partner industries:

Industries shown interest in commercialization:

1. Mojo Panda Exim Pvt. Ltd.
2. Mahadev Woollen Mills

Point 4: Commercialization Status

Technology Transferred to:

M/s Mojopanda Exim pvt. Ltd., Gurugram, Haryana (Deed of licence signed with **WRA royalty terms**)

Raymond Ltd. has also shown their interest in taking the above technology.