

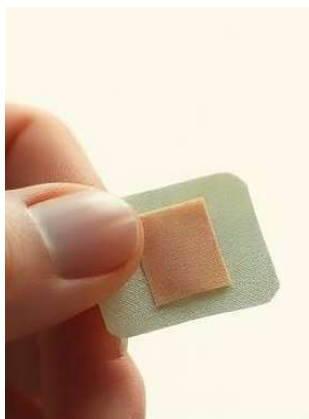
Spinning Ancient Wisdom into Future Cures



Fig. 1: Preparation of electrospinning solution



Fig. 2: Nanofibre mat formation in the electro spinning machine



Picture 3: Electrospun nanofibre mat loaded with natural bioactive drugs

This project explores transforming indigenous, naturally sourced materials into functional textiles by blending traditional knowledge with modern textile engineering. Drawing from plants long valued in local healing traditions, bioactive compounds are extracted and integrated into biocompatible polymer matrices through electrospinning, creating nanofibrous materials with functional qualities.

The concept emphasises sustainability by using renewable, biodegradable resources while reducing reliance on synthetic chemicals. It also highlights the cultural continuity of indigenous plant use, reinterpreted for contemporary needs in healthcare and performance textiles. By merging heritage-based plant science with precision nanotechnology, this approach demonstrates how regional biodiversity can inspire eco-conscious, high-performance textile solutions. It serves as a model for environmentally responsible products to meet modern demands while honouring traditional wisdom.

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