

GRANTED (IN495022) Formulation for wound healing



NEED

Each year, over 300 million chronic wounds worldwide fail to heal properly, leading to 85% of lower limb amputations. Current dressings often lack biocompatibility, causing delayed healing, infection risks, and healthcare costs rising above \$25B globally.

TECHNOLOGY OVERVIEW

This invention presents а porous scaffold composition combining chitosan and chondroitin sulfate. It forms in-situ, promoting faster wound healing by mimicking natural tissue environments, enhancing cell attachment, and minimizing infection without relying on synthetic chemical processes external scaffold or fabrication.

TECHNOLOGY KEY FEATURES

In-situ forming biopolymer scaffold with high molecular weight chitosan and chondroitin sulfate, supporting rapid wound healing, infection control, and natural tissue regeneration without complex synthetic steps or toxic additives.

MARKET ANALYSIS

The global wound care market is projected to reach \$31.7 billion by 2033, growing at a CAGR of 5.2%. Aging population, diabetes prevalence, and demand for advanced bioactive wound therapies are driving growth. [Source: Market Research Future, 2024]

Target Industries

Advanced Wound Care, Regenerative Medicine, Hospital and Home Healthcare. , Wound dressing product developers, regenerative therapy research units, clinical healthcare solution providers for acute and chronic wound management.

AT A GLANCE

 SDG 3 (Good Health and Well-being), SDG 9 (Industry, Innovation, and Infrastructure), SDG 12 (Responsible Consumption and Production)

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Technology is available for licensing/ co-development. Reach out to Prof. Deepak Chitkara, Coordinator, BITS Technology Enabling Centre, BITS Pilani Contact Details: tec.bits@pilani.bits-pilani.ac.in, 91 1596-255913

