

# NEW MATERIAL FOR COVERING CHRONIC WOUNDS



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## TECHNOLOGY:

The production technology is based on staple microfibers of sodium hyaluronate and oxidized starch, containing a physiologically acceptable acid. The result is a mechanically strong and flexible self-supporting sheet. Possibility of incorporating iodine as a disinfectant in the form of a stable complex with oxidized starch and a shelf life of over 3 years.

## OPPORTUNITY:

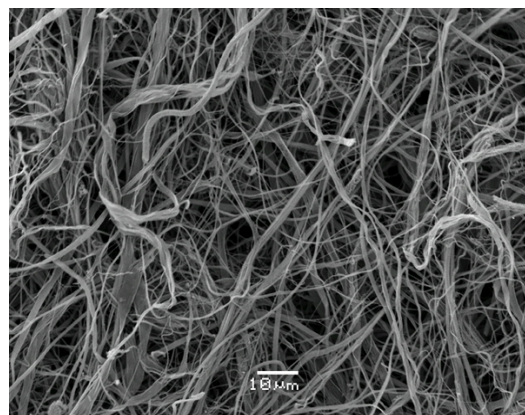
Non-healing wounds are a worldwide problem, especially in diabetics. Wounds are usually infected with microorganisms that form a very resistant so-called biofilm and have an alkaline pH. Thus, wound protection should simultaneously "acidify" and disinfect the wound environment.

## DEVELOPMENT PHASE:

Material for covering wounds has been tested for mechanical strength and flexibility sufficient for use in medicine for covering wounds. In addition, antimicrobial tests were performed on gram-positive and gram-negative bacteria and yeasts. Bacteriostatic and bactericidal effects have been confirmed (*Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Escherichia coli*, *Candida albicans*, *Staphylococcus aureus*).



*Different forms of material for covering wounds*



*REM image of staple microfibers*

## WHAT TECHNOLOGY SOLVS:

There are wound covers or various gels for chronic wounds available on the market. Wound covers are often based on a silver disinfectant, newly in nano-form. The basic problem is that silver is physiologically non-degradable. There are also gels that contain sodium hyaluronate and iodine. The disadvantage is their instability over time. The offered technology brings a solution in the form of a "spinnable" stable complex of iodine with starch containing a physiologically acceptable acidifying component.

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### Patent situation:

Filled CZ patent application

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