

# Proof of principle: a hygroscopic compound for the removal of biofilm and necrosis in hard to heal ulcers and wounds

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## Abstract

Topical desiccation agent (TDA) is a chemical compound, designed to debride through strong hygroscopic action. This leads to desiccation of tissues and microorganisms. This disruptive method causes rapid dissolution of biofilms and necrosis and is therefore assisting in granulation development and reepithelialization of the wound bed. The aim of this study was testing the compound for safety and performance.

A proof-of-principle study in Italy (submitted for publication) was conducted with 54 patients with hard to heal lesions. The study was IRB approved. The main objective of the study was assessment of safety, performance (debridement, development of granulation tissue), and healing.

### Results:

The study proved TDA to be safe and effective with 92.5% of all lesions reaching complete granulation and 74.0% reaching complete reepithelialization. In an average follow-up of 151 days.

Three representative cases are presented, an 81-year-old male patient with a non-healing lesion on the left posterior lower leg, a 77-year-old female suffering from a non-healing, post-trauma lesion over the right Achilles tendon, and 83-year-old diabetic female with severe peripheral arterial disease and previous toe amputations, who was suffering from a gangrenous lesion of the left foot. The three patients had been treated with different materials and techniques for a while, without healing progress.

In all patients one application of TDA was enough to remove the biofilm and necrosis. All lesions proceeded to granulation and subsequent reepithelialization with only regular dressing changes.

### Conclusions:

The cases presented here are an indication of TDA to be able to potentially remove biofilm and necrosis rapidly and efficiently, thus increasing the chance of healing of stalled wounds.

## Biography

Hans-Pieter Snels has completed his MSc at the University of Twente in Technical Medicine; He started his career in the Regulatory consultancy for medical device companies, after a while he moved to DEBx medical where he grew to the position of scientific director. DEBx Medical is a new and disruptive medtech company focussed on healing of chronic wounds.

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