



Bria Robinson

MS Thesis: The Distribution of Diclofenac Sodium in Porcine Skin: A Quantitative Approach Using Franz Diffusion Cells and Tape Stripping

Author: Bria Robinson was born and raised in Florida, USA. In 2021, they began working at a hospital while pursuing a career in pharmacy, earning their Pharmacy Technician Certification and Registration in 2022. Driven by a strong passion to advance their path in healthcare, they began studying Health Sciences, with an emphasis on Pharmaceutical Sciences, at the University of Iceland in 2023. While completing their master's degree, Bria works at Alvotech.

Short summary: This project investigated the permeation behavior of diclofenac sodium (DS) through porcine skin, using Franz diffusion cells and tape stripping. Data obtained from these techniques, combined with the results from the remaining dermis and subcutaneous fat layer, provided a more comprehensive assessment of the distribution profile of DS—from the donor chamber through the skin and into the receptor chamber. The results demonstrated that the permeation and distribution of DS could be effectively tracked. Although a decrease in the diffusion coefficient was observed, drug accumulation in both the skins and receptor solutions increased over time. These findings suggested that DS may be more effective as a long-term transdermal patch, potentially leading to improved therapeutic outcomes and better long-term patient compliance.