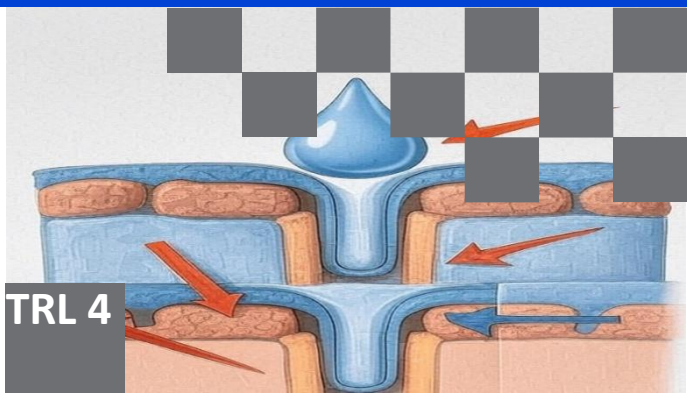
physics

Method for Determining the Diffusion Coefficient of Biologically Active Substances for Transdermal Administration



About the solution

The invention relates to a method and device for determining the dynamics of transport of biologically active substances, in particular drugs administered transdermally.

The solution employs a biological membrane that mimics the epidermal barrier, allowing for precise determination of diffusion coefficients without the need for complex and costly analytical equipment.

The developed method is based on the analysis of changes in contact angles of a test liquid droplet on the membrane surface, enabling real-time monitoring of the penetration dynamics of active substances.

The device designed for this purpose enables dynamic, precise measurements and offers a simpler setup compared to traditional Franz diffusion cells or spectroscopic methods.

Authors

University of Gdańsk:
Prof. Stanisław Pogorzelski
PhD Paweł Rochowski
MSc Maciej Grzegorczyk

IP Protection

The invention is protected by the Polish Patent Office under the following number: **Pat.240500**

Applications

- Preclinical drug testing and pharmacokinetics,
- Pharmaceutical industry
- Cosmetic industry
- Biophysics and biomaterials research.

Cooperation opportunities:

- Research and development, partnership,
- Technology licensing,
- Commercialization.

biuro@ctt.ug.edu.pl
ul. Wita Stwosza 63
80-308 Gdańsk
www.ctt.ug.edu.pl

Małgorzata Bastian-Michalska
+48 725 994 400