

Skin Absorption studies

Our skin is the largest organ in the body and one of the most complicated. It has many roles in the maintenance of life and health. It plays a crucial role in providing an airtight, watertight and flexible barrier between the outside world and the regulated systems within the body. It also contributes to temperature regulation, immune defence, vitamin production, and sensation. Skin absorption studies provide information on the permeation of drugs, allergens, and other substances through and not unbroken skin. Hence, the resulting information can be used either to optimize topic active substances delivery or to enable risk assessment of chemicals or dermo-cosmetic products, according to regulatory guidelines. Oroxcell offers a broad selection of test systems to assess cutaneous or distribution permeation.

From ex vivo skin to reconstructed human tissues, Oroxcell will help you to choose the right test system adapted to your needs.



Oroxcell cumulates a long experience in In vitro technologies to address skin permeation and toxicity, using different sources of skin, to evaluate the fate of drugs or xenobiotics in general. Assay portfolio, spans from screening assays to select most promising formulations for drugs to optimize systemic exposure, up to regulatory compliant studies for addressing the potential of toxicity of xenobiotics.



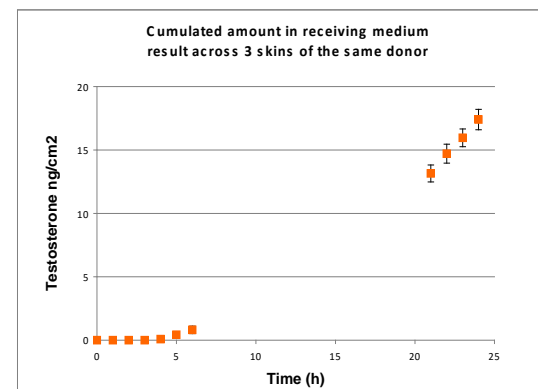
Using Reconstructed Human Epidermis



Using Franz Cells and fresh or frozen Human skin

Exemple: Percutaneous flux accros human skin using Franz cell
TestoPatch® absorption through real human skin

Test compound: Testosterone patch		
	Amount in receiving medium (µg/cm ² /24h)	Flux (µg/cm ² /h)
C1	18,1	1,4
C2	17,6	1,6
C3	16,5	1,3
C4	32,5	2,0
C5	23,6	1,3
C6	23,7	1,3
Mean	22,0	1,5
s.d.	6,0	0,3



Experimental *in vitro* flux : $1.5 \pm 0.3 \mu\text{g} / \text{h} / \text{cm}^2$
Transdermal flux in human obtained with TestoPatch® : $1.7 \mu\text{g} / \text{h} / \text{cm}^2$

Applications

- Diffusion of active or potentially toxic substances across Skin
- Distribution of active or potentially toxic substances within the Skin layers
- Metabolism of active or potentially toxic substances by the Skin

Offers And Services

- Scientific guidance and consultancy
- Bioanalytical expertise
- Both Screening and regulatory services
- Permeation across standardised reconstituted Human Skins (Rhe)
- Permeation across frozen or fresh Human skin
- Distribution within Human Skin

In Vitro ADME