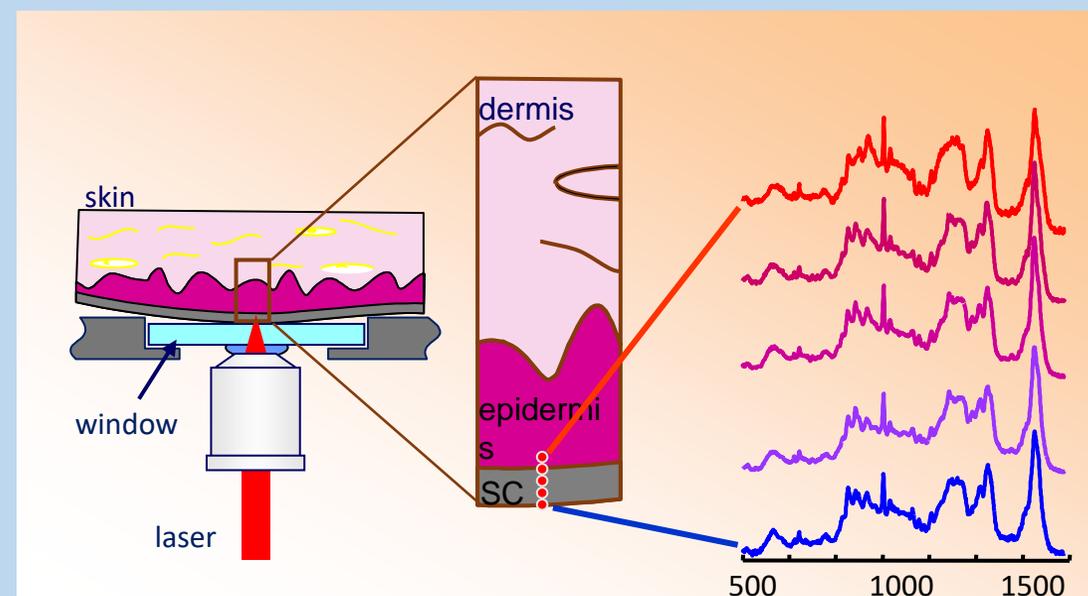
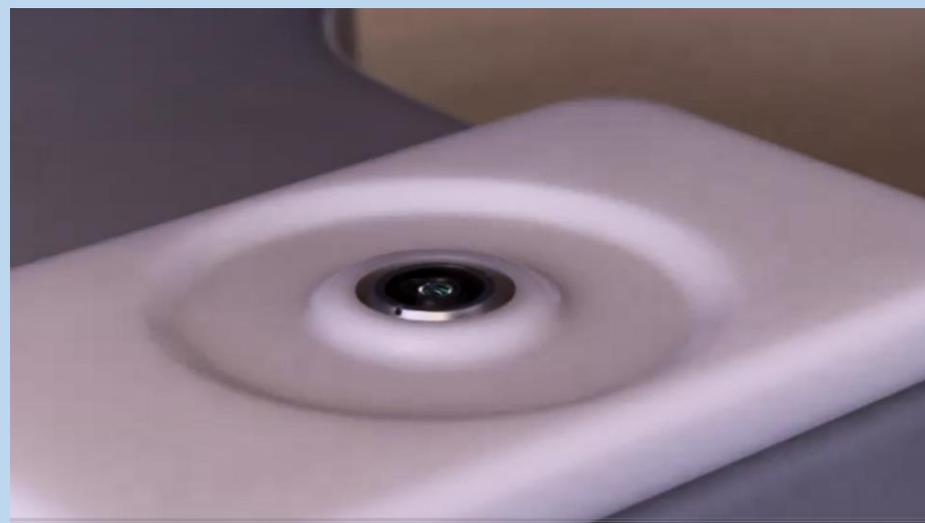
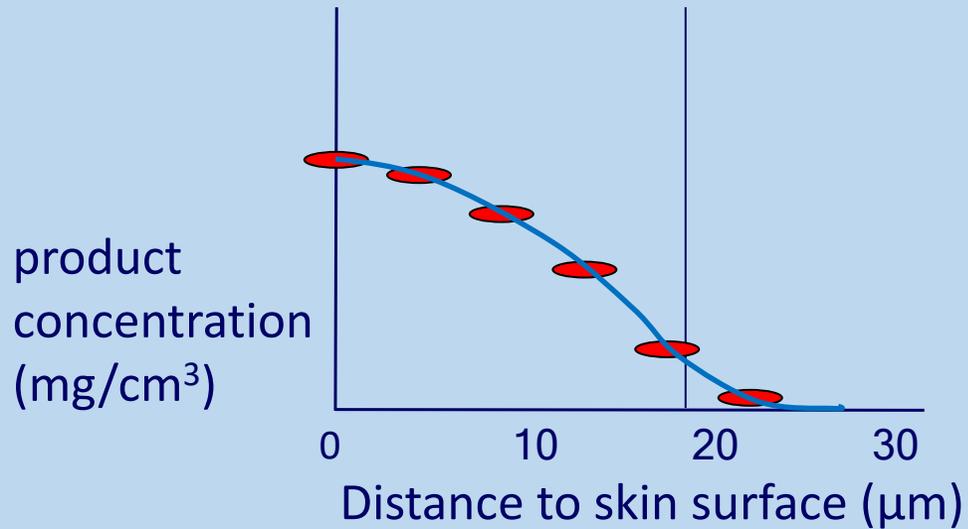
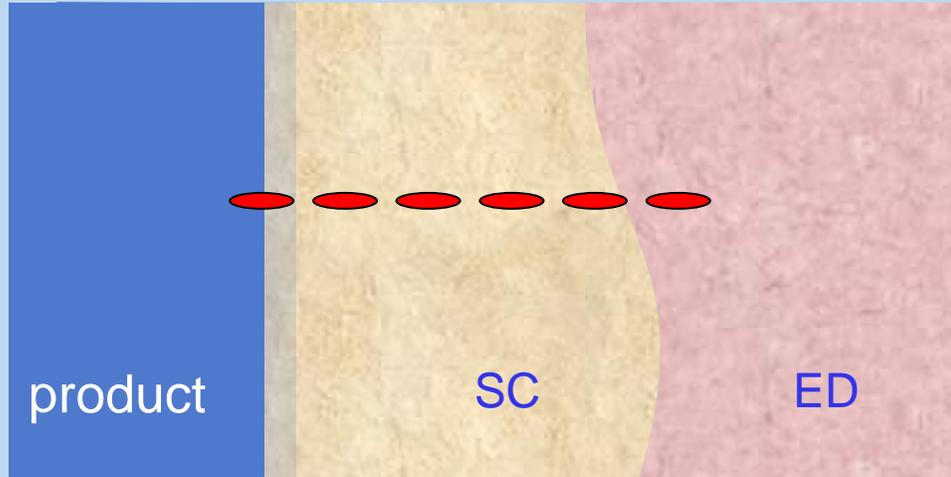
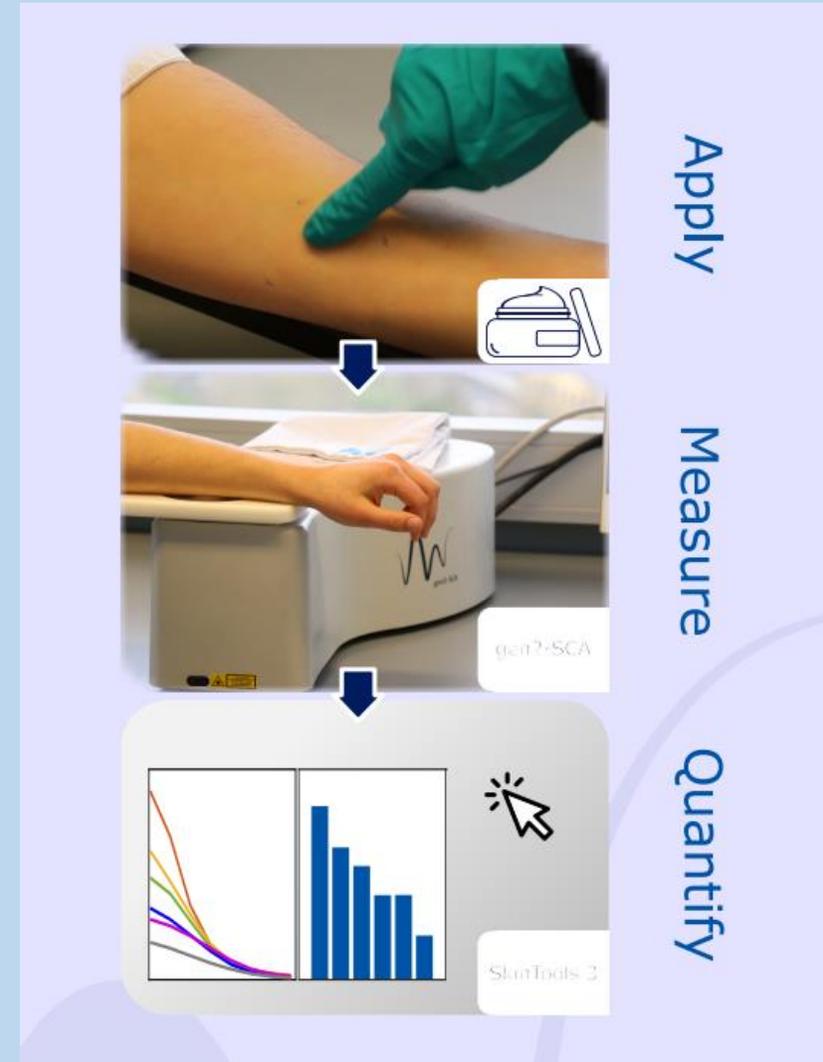


in vivo molecular skin analysis by Raman spectroscopy



Skin penetration of chemicals: quantitative *in vivo* analysis

The workflow is divided into three stages:

- Apply:** A person wearing a green glove applies a substance to the skin of an arm. An icon of a jar and applicator is shown.
- Measure:** A hand is shown operating a device labeled 'gen2-SCA' (Skin Corneometer 2).
- Quantify:** A computer screen displays a graph and a bar chart, with a mouse cursor pointing at it. The software is labeled 'SkinTools 2'.

Vertical text on the right side of the diagram reads: Apply, Measure, Quantify.

skin characterization

- skin typing
- age related effects
- seasonal effects
- skin conditions
- skin lesions

Typically applied products

penetration & permeation of:

- drugs
- personal care actives
- perfumes (fragrances)
- chemicals



gen2-SCA → dedicated diagnostic devices

- Patient stratification Atopic Dermatitis
- Skin hydration
- Skin ageing
- Skin barrier test

➡ limited spectral information → device simplification: miniaturization, cost reduction

gen2-SCA combination with skin imaging modalities

- OCT, CVM, ...

RiverD-expertise

- optical design for skin applications
- custom-designed microscope objectives
- HPRM - High-performance Raman module
- tissue analysis treatment-effects