

Your R&D Partner in Phytocosmetics



Our Skills. Your Superiority.

Be different, be superior!



You want to provide products of excellence, gain control over the entire product life cycle?
Then you might have the following requirements:

- Proof of cosmetic claims
- Proof of product safety
- Exclusion of toxic compounds
- Quality control of raw materials
- Quality control for your production procedures
- Monitoring of the compliance of distributors and franchise partners
- Ensuring even distribution of active agents throughout all product batches
- Optimization of the production process


... We provide the customized scientific solutions.

Our portfolio

Customized plant screening solutions for:

- Identification of bioactivities
- Confirmation of cosmetic claims
- Quantification of specific compounds
- Safety assessment
- Targeted and untargeted screening approaches
- Quality control
- Methods for your in-house quality control
- Analysis of volatile compounds

High-end techniques at your service

- **2D and 3D cell analysis**  **No more testing in animals and humans**
 - Testings of **final** cosmetic formulations
 - ✓ Safety assessments (skin corrosion, irritation OECD TG 439, OECD TG 431)
 - ✓ Identification of skin sensitizers (IL-18 release)
 - ✓ Testing of properties like immunomodulation or brightening of the skin
 - ✓ Testing of the epidermal barrier function
- Screening for anti-inflammatory activity (NF- κ B signalling)
- Ultra-high-performance liquid chromatography
- Mass spectrometry techniques, such as
 - ✓ ultra-high-resolution time-of-flight MS
 - ✓ Direct analysis in real time-MS
 - ✓ Matrix assisted laser desorption ionization MS
 - ✓ Gas chromatography-MS-hyphenation

ADSI – your strong partner in innovations

A unique combination of competences allows us to solve your most sophisticated research challenges:

- United know-how in analytical chemistry and cell biology
- Highly instrumental laboratories with most advanced technologies for extraction, screening and testing of plant extracts
- Extensive experience in industry collaborations
- Existing cooperations with strong partners in research and world leading pharmaceutical, cosmetic and nutritional industry

Our assays in 3D cell cultures – potent tools for proofing your product claims

Claims like.....

skin viability, barrier function of the epidermis, calming/regeneration, tanning or energizing, after sunburn regeneration, sensitization (OECD TG 442C), total phenol-content, anti-oxidative potential, anti-aging...



Epidermal 3D cell cultures – test example

Induction of inflammation

Incubation with a skin challenging agent
(e.g. UV irradiation, TNF- α)

+

Testing

Performed in 3 independent batches of cell cultures, 2 repeats each.



Negative controls



FINAL Product



Positive controls

2 different anti-inflammatory agents, e.g. cortisone

WASHING

Proof of skin viability

- LDH Assay – exclusion of cell lysis
- MTT Assay – monitoring of the metabolic activity

Secretomics

Measurement of inflammatory response, e.g. dozens of cytokines, after certain intervals in all assays

Assessment of product response

Comparison of the biological effects of the product versus controls proves the claim:

- ✓ Skin calming
- ✓ Skin viability



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