

Dermocosmetic Laboratory Testing: Molecular and clinical

Claims substantiation and R&D marketing support



DERMA  **CLAIM**
Test & Trust

Test & Trust

Dermaclaim Lab S.L. is a biotech laboratory focused on the study of the skin and the **testing of dermocosmetic** and nutraceutical products. We provide you R&D testing and counseling at the same time, thinking always in your marketing needs.

Dermaclaim wants to be your **“Test & Trust” partner** for in vitro and clinical testing.

The company was born from the desire to provide the **most reliable** testing service, based on our passion for excellence, after more than 7 years of expertise in the cosmetic and food-nutraceutical business. Dermaclaim exemplifies its passion in a unique focus for **quality**, both in our laboratory services as well as customer’s support and response.

Our **mission** is to ensure the generation of accurate and innovative findings to substantiate the marketing **claims**, focusing our research in dermocosmetic and nutraceutical products development. We will provide full transparency, our customers will always have access to the complete raw data, and we will make use of cutting-edge technologies, both for the in vitro bioassays and the clinical trials in human volunteers.

Dermaclaim, Test & Trust.

Dermaclaim provides **reliable, fast, and cost-effective** testing



1

Client describes project



2

Lab Generates Proposal



3

Testing Begins



4

Reports Delivered

14 REASONS TO TRUST DERMACLAIM

- ✓ **Customer support** in a comfort, close and quality manner.
- ✓ **Fast response** to any query in less than 24 hours.
- ✓ Scientific **quality** focused on your **marketing**.
- ✓ **Full transparency** (complete access to raw data).
- ✓ Access to the **latest equipment** and cutting-edge technologies.
- ✓ Improved technical **conditions** of study.
- ✓ Special focus on the panel **recruitment**.
- ✓ Location in the **University of Valencia's Science Park**.
- ✓ **Affordable prices**.
- ✓ Thorough final complete **report**.
- ✓ R&D **collaborations** with public and private organisms.
- ✓ **Flexibility** and custom-made studies.
- ✓ Scientific and market **know-how**.
- ✓ Led by **passionate** experts.



Laboratory facilities for in vitro testing

Our laboratory is located in the **University of Valencia's Science Park (PCUV)** and the **Central Support Service for the Experimental Research (SCSIE)**, which allow us to use the latest technologies.

 Confocal Microscopy

 Cell Culture

 Flow Cytometry

 Mass Spectrometry

 Genomics

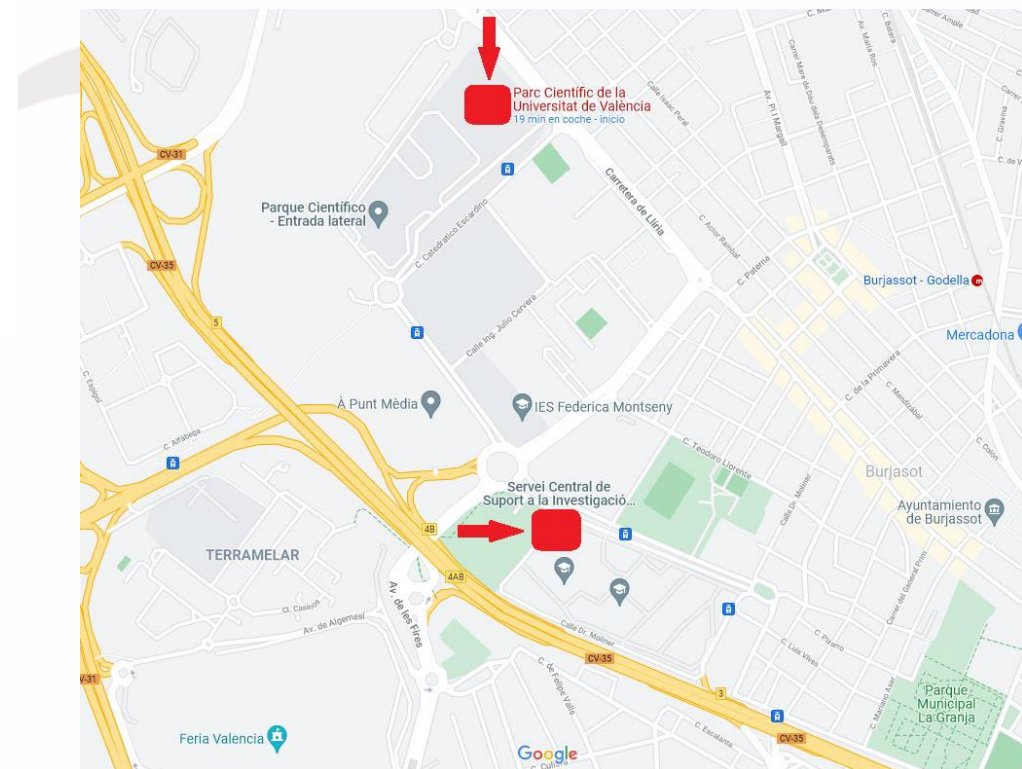
 Proteomics

 NMR

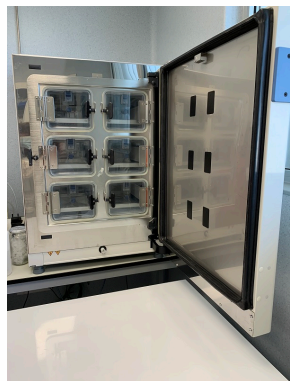
 Atomic Spectroscopy

Parc Científic Universitat de València
Calle Catedrático Agustín Escardino, 9
46980 Paterna, Valencia (España)

Servei Central de Suport a la Investigació Experimental
Calle Doctor Moliner, 50
46100 Burjassot, Valencia (España)



FACILITIES

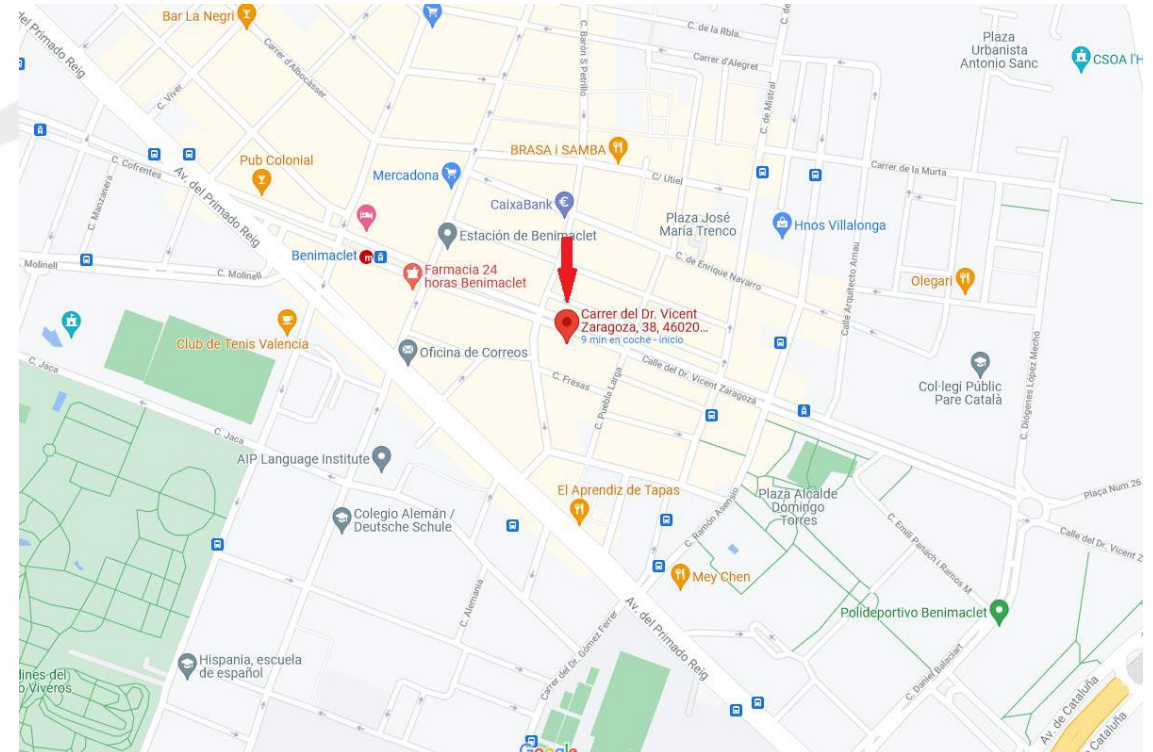


Clinical facilities for in vivo testing

Our clinical facilities are located in the city of Valencia, inside an area with several neighborhoods and near schools and universities, making **easier** the **panel recruitments**.

- ✔ Eotech AEVA-HE V4
- ✔ VisioTOP-500 bench
- ✔ Canon EOS 850D
- ✔ FrameScan Full NG-48
- ✔ Corneometer CM 825
- ✔ Sebumeter SM 815
- ✔ Thermal FLIR A50
- ✔ Cutometer Dual MPA 580
- ✔ Mexameter MX 18
- ✔ Colorimeter CL400
- ✔ Glossmeter GI-200
- ✔ Tewameter TM Hex
- ✔ Corneofix + ImageJ

*Calle Doctor Vicent Zaragoza, 38
46020, València (España)*



FACILITIES



...MORE IMAGES COMING SOON...

If you are a manufacturer or distributor of cosmetic products or ingredients, we offer you a wide R&D portfolio to substantiate your **claims**, complying with the **regulatory** requirements and supporting your **marketing**.

□ Efficacy tests

In vitro, ex vivo and clinical bioassays using the latest technologies to provide the most accurate results. Our portfolio include studies to demonstrate Claims including anti-wrinkles and whitening, antioxidant and antiaging, firming and moisturizing, anti-pollution and photoprotection, anti-hair loss and hair growth regulation, etc.

□ Safety tests

In vitro security tests to demonstrate the safety of the samples, before entering into efficacy studies. The testing is performed following OECD protocols for cytotoxicity, irritation, phototoxicity, corrosion, carcinogenicity, absorption, etc.

We'll ensure you always get the **most reliable** results.

IN VITRO EFFICACY

Claims substantiation and R&D marketing support

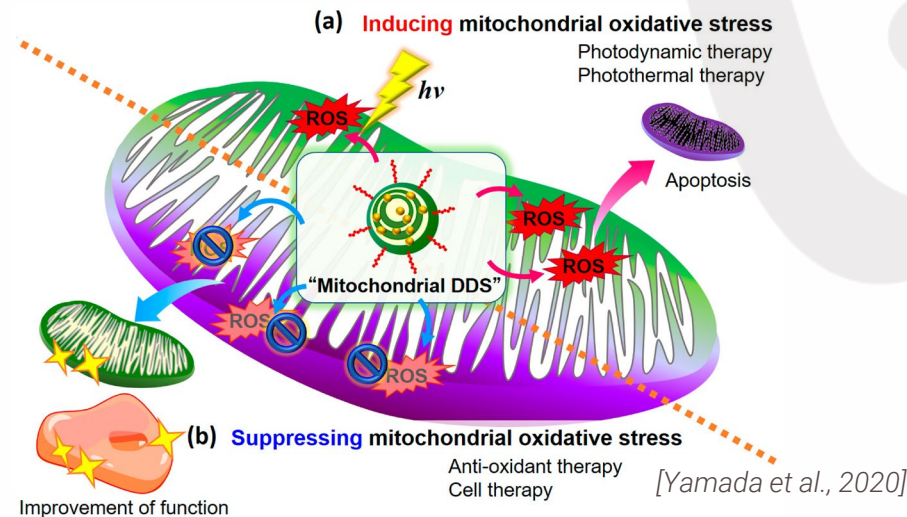
Test & Trust



SERVICES: IN VITRO EFFICACY

ANTIOXIDANT

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE | MODEL |
|-----------------------|--------------------------------|-----------------|---|-------------|----------------------------------|
| ANTIOXIDANT | DC.AOX-GE-001 | Gene Expression | mRNA gene expression (<i>SOD1</i> , <i>SOD2</i> , <i>CAT</i> , <i>NFE2L2</i> , <i>TXN</i> , <i>GPx1</i> ...) | qPCR | HaCaT/NHEK NHDF RHE/RHE FT |
| | DC.AOX-GL-002 | Glutathione | GSH (Reduced glutathione) GSSG (Oxidized glutathione) | LC/MS/MS Tc | |
| | DC.AOX-RO-003 DC.AOX-RN-004 | ROS RNS | Reactive Oxygen Species (ROS) Reactive Nitrogen Species (RNS) | Fluorimetry | |
| ANTIOXIDANT POTENTIAL | DC.AOX-OR-005 | ORAC | Oxygen Radical Absorbance Capacity | Fluorimetry | In tubo |
| | DC.AOX-TE-006 | TEAC | Trolox Equivalent Antioxidant Capacity | Absorbance | |



HaCaT: Immortalized human keratinocytes
 NHEK: Normal Human Epidermal Keratinocytes
 NHDF: Normal Human Dermal Fibroblasts
 RHE: 3D Reconstructed Human Epidermis
 RHE FT: 3D Reconstructed Human Skin Full-Thickness

* Protocols are adapted according to customer's needs (external agents such as UV, LPS, etc., timings, conditions, samples...).

SERVICES: IN VITRO EFFICACY

SKIN AGEING AND PROTECTION

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE | MODEL |
|----------------------------------|--------------|--------------------------|--|-----------------|---------------------|
| ANTIAGING FIRMING | DC.AG-GE-007 | Gene Expression | mRNA gene expression (<i>COL1A1, COL1A2, COL3A1, COL4A1, ELN, MMP1, MMP3, MMP9, MMP13, ACAN, FN1, TNC, HAS1, HAS2, VCAN...</i>) | qPCR | NHDF RHE FT |
| | DC.AG-PS-008 | Protein Synthesis | Protein levels (collagens, elastin, matrix metalloproteinases, hyaluronic acid, aggrecan, fibronectin, laminin, tenascin, versican...) | ELISA | |
| ANTIAGING ANTI-SENESCENCE | DC.AS-TS-009 | Telomere Senescence | Telomere length (pb) after senescence induction | qPCR | NHEK NHDF |
| | DC.AS-TE-010 | Telomere Gene Expression | mRNA gene expression (<i>TERT, TEP1, TRF1, BRG-1, CDKN1A, LMNB1...</i>) after senescence induction or comparing young vs senescent cells | qPCR | |
| | DC.AS-BG-011 | B-Gal Senescence | Beta-galactosidase staining | Absorbance | |
| ANTIAGING CIRCAD. RHYTHM | DC.CR-GE-012 | Gene Expression | mRNA gene expression (<i>CLOCK, BMAL1, CRY, PER, SIRT, NPAS2, RORa...</i>) | qPCR | |
| ANTIAGING CELL CYCLE | DC.CC-GE-013 | Gene Expression | mRNA gene expression (<i>NUDC, BGLAP, CENPF, TGFB2, SKP2, DBF4, CDC7, PARP1...</i>) | | |
| ANTIAGING PROTEASOME & AUTOPHAGY | DC.PS-CL-014 | Chymotrypsin-like | Chymotrypsin-like proteasomal activity | Fluorimetry | HaCaT/NHEK NHDF/RHE |
| | DC.PS-PL-015 | Protein Location | Cellular sub-location (Amyloid Precursor Protein, Clusterin, LC3, UCHL1...) and stainings (Giantin, Mito) | Immunofluoresce | NHEK/NHDF RHE |
| | DC.AP-GE-016 | Gene Expression | mRNA gene expression (<i>MAP1LC3A/B</i>) | qPCR | |

SERVICES: IN VITRO EFFICACY

SKIN AGEING AND PROTECTION

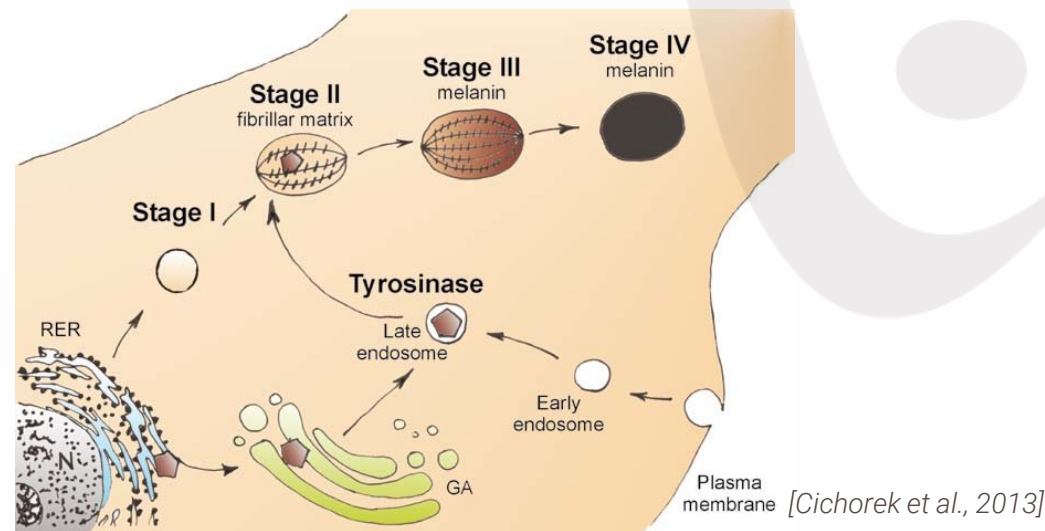
| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE | MODEL |
|--------------------------------|--------------|-----------------------|--|----------------|---------------------------------------|
| SKIN PROTECTION | DC.SP-CV-017 | Cell Viability UV | Cell viability (MTT) after UVA or UVB | Absorbance | HaCaT/NHEK NHDF/NHEM RHE/RHE FT |
| | DC.SP-CV-018 | Cell Viability HEV-IR | Cell viability (MTT) after blue light (HEV) or infrared (IR) | | |
| SKIN PROTECTION ANTIOXIDANT | DC.SP-OS-019 | Oxidative Stress UV | Reactive Oxygen Species after UVA or UVB | Fluorimetry | |
| | DC.SP-OS-020 | Oxidat. Stress HEV | Reactive Oxygen Species after blue light (HEV) or infrared (IR) | | |
| SKIN PROTECTION DNA PROTECTION | DC.SP-DP-021 | DNA Protection | Thymine dimers (T-T), histone γ -H2Ax, or 8-oxo-dG after UVB (application before irradiation) | Flow cytometry | |
| SKIN REPAIR DNA REPAIR | DC.SP-DR-022 | DNA Repair | Thymine dimers (T-T), histone γ -H2Ax, or 8-oxo-dG after UVB (application after irradiation) | | |
| SKIN PROTECTION DETOXIFYING | DC.DX-LP-023 | Lipid Peroxidation | Malondialdehyde (MDA-TBARs) after UVA or UVB | ELISA | |
| | DC.DX-PC-024 | Protein Carbonylation | Protein carbonyl after UVA or UVB | | |
| | DC.DX-PG-025 | Protein Glycation | Advanced glycation end (AGE) after UVA or UVB | | |

NHEM: Normal Human Epidermal Melanocytes

SERVICES: IN VITRO EFFICACY

SKIN PIGMENTATION

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE | MODEL |
|-----------------------------|--------------|----------------------------------|--|-----------------------|--------------------|
| WHITENING PRO-PIGMENTING | DC.PG-ML-026 | Melanin | Melanin levels after UV irradiation | Absorbance | NHEM / B16 RHPE |
| | DC.PG-GE-027 | Melanogenesis Gene Expression | mRNA gene expression (<i>TYR</i> , <i>TYRP-1</i> , <i>TYRP-2</i> , <i>MITF</i> , <i>POMC</i> , <i>PMEL17</i> ...) | qPCR | NHEK-NHEM |
| | DC.PG-TA-028 | Tyrosinase Activity | Tyrosinase enzymatic activity | Colorimetry | In tubo |
| | DC.PG-FM-029 | Fontana-Masson | Melanin staining (black), nuclei (red) and cytoplasm (Pink) using bright-field microscopy | Histological staining | NHEM RHPE |



B16: Mouse melanoma cells
RHPE: Reconstructed Human Pigmented Epidermis

SERVICES: IN VITRO EFFICACY

HAIR GROWTH, ALOPECIA & GRAY

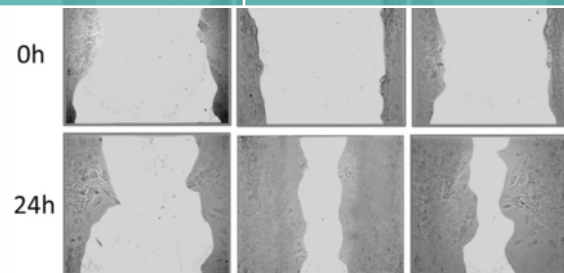
HFDP: Human Follicle Dermal Papilla Cells
 HF: Human follicles extracted from volunteers
 Human hair: Human hair swatches extracted from volunteers

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE | MODEL |
|-----------------------------|--------------|-----------------------|--|----------------------------------|---------------------|
| HAIR GROWTH & PROLIFERATION | DC.HG-CP-030 | Cell Proliferation | Cell proliferation using MTT * + Control included | Absorbance | HaCaT HFDP |
| | DC.HG-CP-031 | | Cell proliferation using BrdU * + Control included | ELISA Flow cytometry | |
| | DC.HG-GE-032 | Gene Expression | mRNA gene expression growth factors (<i>EDN1, IGF1, HDC, TGFb, VEGF, KGF, FGF1, FGF2, FGF10, EGF...</i>) | qPCR | HFDP |
| | DC.HG-PH-033 | Philpott | Human follicles growth ex vivo | Image Analysis | HF |
| | DC.HG-PE-034 | Protein Expression | Ki67, B-catenin, apoptosis... | Flow Cytometry Confocal Micro | HFDP HF |
| ANTI-HAIR LOSS | DC.HL-AA-035 | Androgenetic Alopecia | mRNA gene expression 5-alpha Reductase (<i>SRD5A1, SRD5A2, SRD5A3</i>) | qPCR | HFDP |
| HAIR STRENGTH | DC.HS-KP-036 | Keratin protein | Keratin protein levels (<i>KRT1, KRT31, KRT37, KRT84, KRT86...</i>) | ELISA | HaCaT NHEK |
| HAIR PROTECTION | DC.HP-OS-037 | Oxidative Stress | Reactive Oxygen Species (ROS) after UV damage | Fluorimetry | Human Hair swatches |
| | DC.HP-PD-038 | Protein Degradation | Protein degradation after UV damage (Bradford) | | |
| ANTI-GRAY | DC.AG-GE-039 | Gene Expression | mRNA gene expression (<i>IRF4, MITF, TYR, DCT...</i>) | qPCR | NHEM |

SERVICES: IN VITRO EFFICACY

HYDRATION, DERMAL BARRIER, PROLIFERATION & REGENERATION

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE | MODEL |
|--------------------------------------|--------------|------------------------|--|---------------------------|----------------------------------|
| MOISTURIZING | DC.MT-PS-040 | Biomolecules Synthesis | Biomolecules levels (hyaluronic acid, aquaporins, ceramides, GAGs...) | ELISA | HaCaT/NHEK NHDF RHE/RHE FT |
| | DC.MT-GE-041 | Gene Expression | mRNA expression (<i>HAS1, HAS2, HAS3, HYAL1, HYAL2, HYAL3, AQP1, AQP2, AQP3...</i>) | qPCR | |
| EPIDERMAL DIFFERENTIATION & COHESION | DC.ED-PS-042 | Protein Synthesis | Protein levels (ceramides, filaggrin, involucrin, cytokeratins, integrin, occludin, claudin, connexins, collagens, desmoglein, B-catenin...) | ELISA Immunofluoresc | |
| CELL PROLIFERATION | DC.CP-PF-043 | Proliferation | Cell proliferation (MTT, NRU) *T0 included (for inhibition) | Absorbance Fluorimetry | HaCaT/NHEK NHDF |
| | DC.CP-PF-043 | Proliferation | Cell proliferation using BrdU *T0 included (for inhibition) | ELISA Flow cytometry | |
| | DC.CP-CC-044 | Cell cycle | Double staining Ki67/PI or DAPI Single staining PI * | Flow cytometry | HaCaT/NHEK NHDF RHE/RHE FT |
| REGENERATION WOUND-HEALING | DC.WH-SA-045 | Scratch assay | Wound-healing. *Control is included | Image Analysis | HaCaT/NHEK NHDF |



SERVICES: IN VITRO EFFICACY

SKIN POLLUTION

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE | MODEL |
|-----------------------------------|--------------|--------------------------|---|------------------------------|--|
| ANTI-POLLUTION | DC.AP-CV-046 | Cell Viability | Cell viability after Urban Dust | Absorbance | HaCaT/NHEK NHDF/NBFC HPF/HUVEC RHE/RHE FT |
| ANTI-POLLUTION ANTIOXIDANT | DC.AP-OS-047 | Oxidative Stress | Reactive Oxygen Species (ROS) after Urban Dust Cell viability quantification is included in parallel | Fluorimetry Absorbance | |
| ANTI-POLLUTION ANTI-INFLAMMATI | DC.AP-AI-048 | Inflammation | mRNA gene expression (<i>TNF</i> , <i>IL1A</i> , <i>IL1B</i> , <i>IL6</i> , <i>IL8</i> , <i>IL17</i> , <i>COX2</i> ...) after Urban Dust or heavy metals | qPCR | |
| ANTI-POLLUTION ANTI-APOPTOSIS | DC.AP-AP-049 | Apoptosis | mRNA gene or Protein expression (<i>BAX2</i> , <i>ARNTL</i> , <i>FAS1</i> , <i>CASP9</i> ...) after Urban Dust | qPCR/ELISA Immunofluoresc | |
| ANTI-POLLUTION | DC.AP-XM-050 | Xenobiotic Metabolism | mRNA gene expression (<i>CYP1A1</i> , <i>NFE2L2</i>) after Urban Dust, dioxins, tobacco extract or heavy metals | qPCR Immunofluoresc | |



NBFC: Normal Bronchial Fibroblasts cells
HPF: Human Pulmonary Fibroblasts
HUVEC: Human Umbilical Vein Endothelial Cells

SERVICES: IN VITRO EFFICACY

SKIN INFLAMMATION

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE | MODEL |
|------------------------------------|--------------|--------------------------------------|--|----------------------------------|--|
| ANTI-IRRITATION | DC.AI-GE-051 | Gene Expression Protein Synthesis | mRNA gene expression or protein levels (<i>TNF, IL1A, IL1B, IL6, IL8, IL10, IL17, ICAM, COX2, ALOX5...</i>) after external induction (LPS, UV, His...) | qPCR ELISA | HaCaT/NHEK NHDF/HDC HTC/PBMC RHE/RHE FT |
| | DC.AI-TF-052 | Transcription Factors | Transcription factors (NFkB, AP1, STAT1...) | Flow Cytometry Immunofluoresc | |
| ANTI-IRRITATION PAIN INHIBITION | DC.AI-PI-053 | Pain Inhibition | mRNA gene expression or protein levels (<i>TRPV1</i> and <i>TNF</i>) after external induction (LPS, UV, His...) | qPCR ELISA | |

HDC: Human Dendritic Cells
 HTC: Human T-Cells
 PBMC: Peripheral Blood Mononuclear Cells

SKIN PENETRATION OR TARGETED-DELIVERY

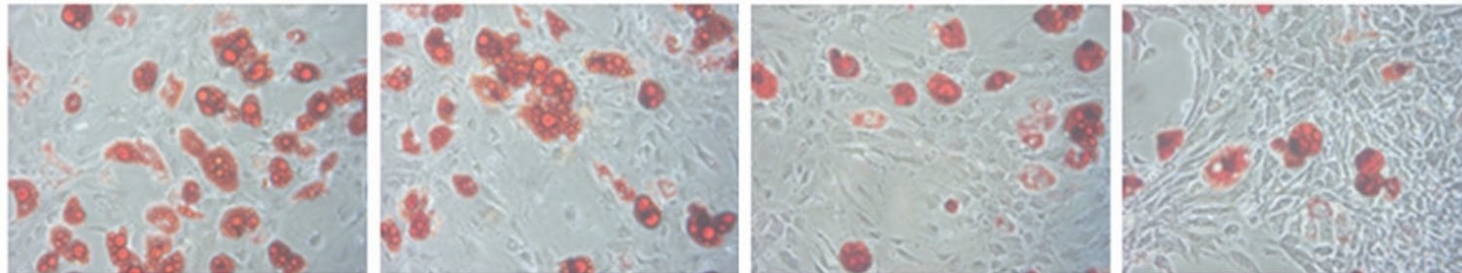
PigS: Pig Skin

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE | MODEL |
|-----------------------|--------------|--|--|----------------------------------|---------------------------------------|
| DERMAL PENETRATION | DC.SP-DP-054 | Penetration Co-localization (delivery) | Immunostaining (DAPI, H&E, fluorescence, protein expression, TUNEL...) | Immunofluoresc Image analysis | HaCaT/NHEK NHDF/PigS RHE/RHE FT |

SERVICES: IN VITRO EFFICACY

ANTI-ACNE, OILY SKIN AND SLIMMING

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE | MODEL |
|-----------------------------|--------------|-----------------------------|--|-----------------------|--------------------------------|
| SLIMMING | DC.SL-FA-055 | Fatty Acid | Total fatty acid content using Oil Red O staining, after induction (AA) | Absorbance | iSEB 3T3-L1 HPAd NHDF |
| | DC.SL-SD-056 | Sebocyte Differentiation | Protein expression (EMA, KRT7, PPAR γ , K7...) | ELISA Western Blot | |
| | DC.SL-LP-057 | Lipogenesis Gene Expression | mRNA gene expression (<i>ATGL</i> , <i>HSL</i> , <i>PRDM</i> , <i>UCP</i> ...) | qPCR | |
| | DC.SL-CL-058 | Cholesterol Adiponectin | Cholesterol and adiponectin content | Fluorimetry ELISA | |
| ANTI-ACNE ANTI-INFLAMMAT | DC.AA-GE-059 | Gene Expression | mRNA gene expression (<i>TNF</i> , <i>DEFB1</i> , <i>SRD5A1</i> , <i>SRD5A2</i> , <i>SRD5A3</i>) after induction (<i>P.acnes</i> , LTA) | qPCR | NHEK NHDF |
| | DC.AA-PS-060 | Protein Synthesis | Protein content (TNFa and B-defensin) | ELISA | |



Control + AA

1 uα/mL + AA

10 uα/mL + AA

50 uα/mL + AA

iSEB: Sebocytes from induced Pluripotent Stem Cell
3T3-L1: Mouse 3T3 adipose
HPAd: Human pre-adipocytes

SERVICES: IN VITRO EFFICACY

OTHERS

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE | MODEL |
|---------------------------|--------------|---------------------|--|-------------------------------|----------------------------------|
| ANTI-STRESS | DC.AS-GE-061 | Stress mediators | Biomolecule's synthesis (CRH, POMC, B-endorphin, cortisol, prolactin, kallikrein-1...) after induction (adrenalin, cortisol, UV) | ELISA | HaCaT/NHEK NHDF RHE/RHE FT |
| ENERGIZING | DC.EG-AT-062 | ATP synthesis | ATP content in starving conditions | Fluorimetry | HaCaT/NHEK NHDF |
| MICROBIOME | DC.MB-BG-063 | Bacterial growth | Bacterial viability (<i>S.epidermidis</i> , <i>S.hominis</i> , <i>P.aeruginosa</i> , <i>P.acnes</i> , <i>S.aureus</i> ...) | Absorbance Colony counting | Bacteria |
| ANTI-MICROBIAL | DC.AM-DD-064 | Disk Diffusion Test | Bacterial growth in antibiogram plaque | Image Analysis | |
| THERMAL SHOCK | DC.TS-CV-065 | Cell Viability | Cell viability after heat (45°C) or cold (4°C) shock | Absorbance | HaCaT/NHEK NHDF RHE/RHE FT |
| | DC.TS-HS-066 | Heat Shock Protein | HSPs content (HSP27, HSP70, HSP90) | ELISA | |
| EPIGENETICS | DC.EG-DM-067 | DNA methylation | DNA methylation after external aggression | Flow Cytometry | NHEK/NHDF |
| | DC.EG-ME-068 | miRNA Expression | miRNAs gene expression (miR-22, -31, -152, -143, -126, -21, -27a, -214, -16, -203, -125b, -34a, -205...) | qPCR | NHEK/NHDF RHE/RHE FT |
| GENE EXPRESSION SCREENING | DC.SC-RS-069 | RNAseq | mRNA gene expression of whole genome | NGS | |

CLINICAL TESTING

Claims substantiation and R&D marketing support

Test & Trust



SERVICES: CLINICAL EFFICACY IN HUMAN VOLUNTEERS

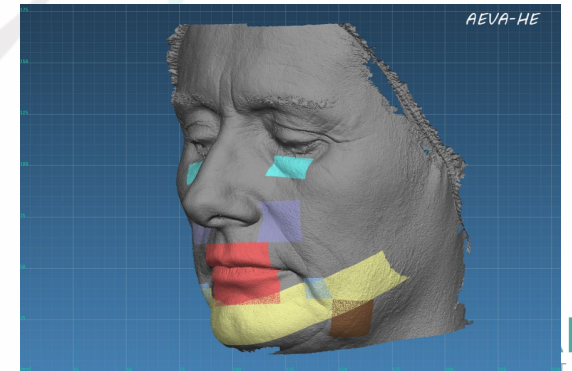
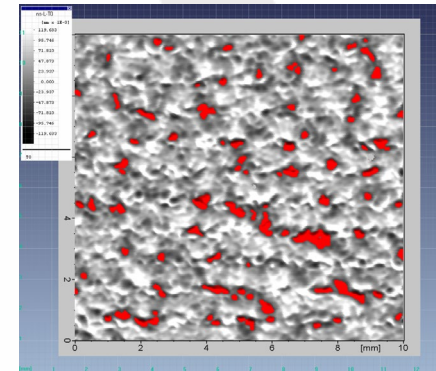
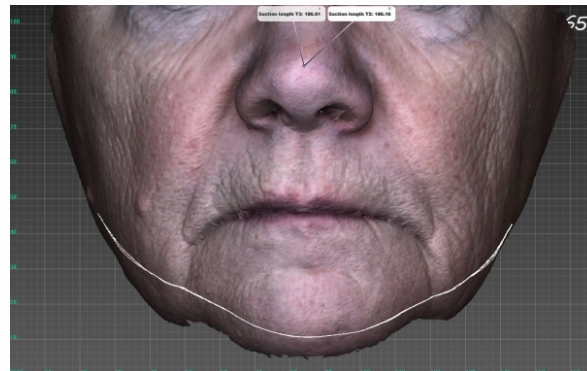
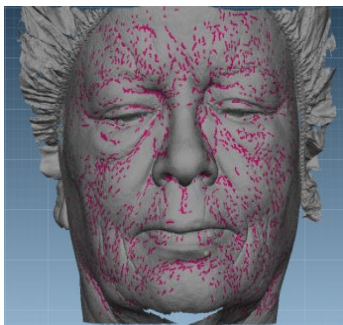
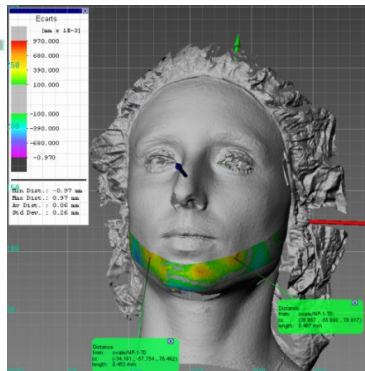
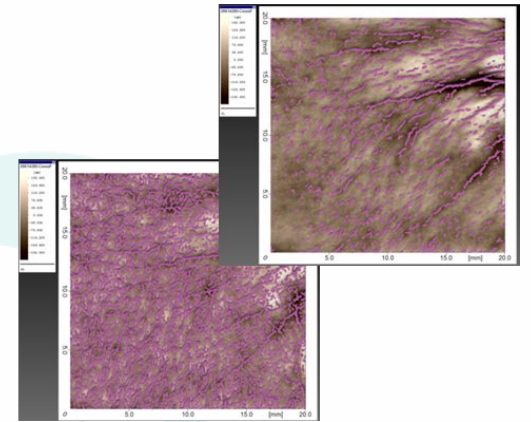
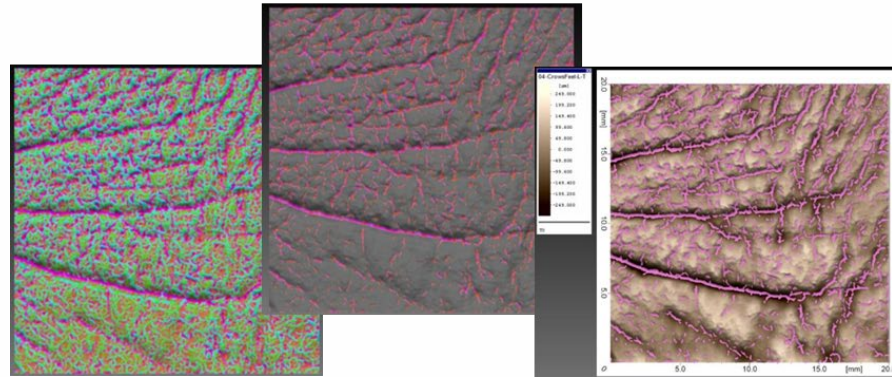
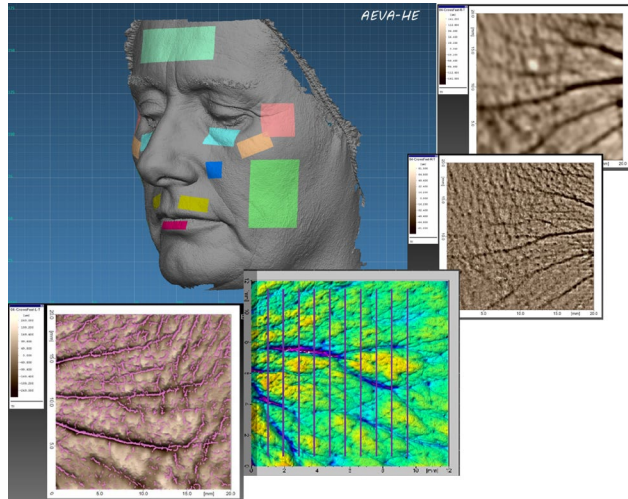
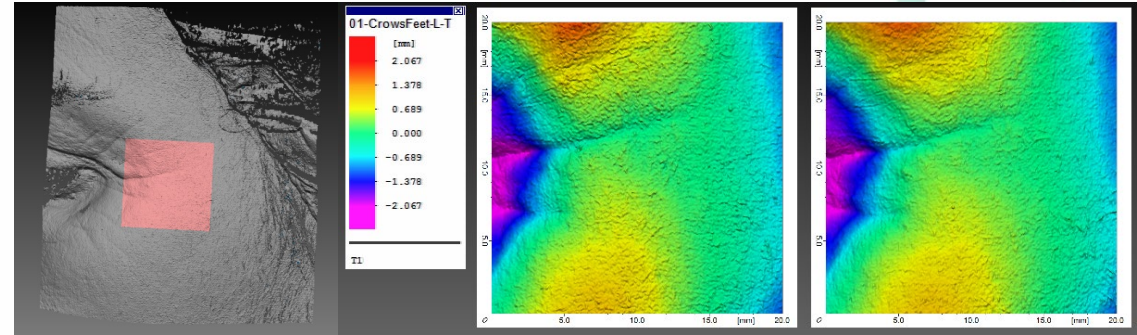
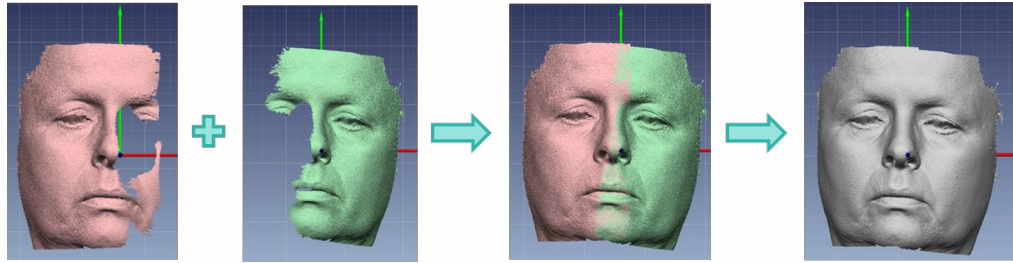
FACE ANTIAGING

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE |
|--------------------------------------|--------------|------------------|--|---|
| ANTI-WRINKLES & FINE LINES | DC.CL-AW-077 | Wrinkles | Wrinkles and fine lines (area, number, height, length, volume...) in forehead, crow's feet, glabellar, eyelids, perioral, nasolabial, lips fine lines, lips corners... | Eotech AEVA-HE V4 FoV S-L with VisioTOP-500 bench |
| ANTI-WRINKLES REMODELING | DC.CL-WD-078 | Wrinkles density | Wrinkles density (ratio of the area) in whole face | |
| SMOOTHING | DC.CL-RG-079 | Roughness | Surface roughness and skin texture (Lr, Sa, St, Stm, Sq) in the Region of Interest (ROI) | |
| ANTI-PORES | DC.CL-PO-080 | Pores | Pores (area, volume, circumference, max and mean height) in the Region of Interest (ROI) | |
| ANTI-EYE BAG ANTI-SAGGING VOLUMIZING | DC.CL-VO-081 | 3D Volume | 3D volume (mean deviation, min and max volumes) in eyebags, cheek, neck, décolleté, nasal folds, oval... | |
| REMODELING V-SHAPE VOLUMIZING | DC.CL-FS-082 | Face shape | Face shape geometry (angles, distance between points, length measurements) in face oval | |
| FIRMING ELASTICITY | DC.CL-CU-083 | Firmness | Firmness, elasticity and fatigue | Cutometer Dual MPA 580 |

* All of our clinical tests include a self-assessment questionnaire, macroscopic digital pictures, marketing pictures, dermatologically tested and clinically tested.

** Protocols are adapted according to customer's needs (number of volunteers, biomarkers, measurements, length, questionnaires, etc.)

SERVICES: CLINICAL EFFICACY IN HUMAN VOLUNTEERS

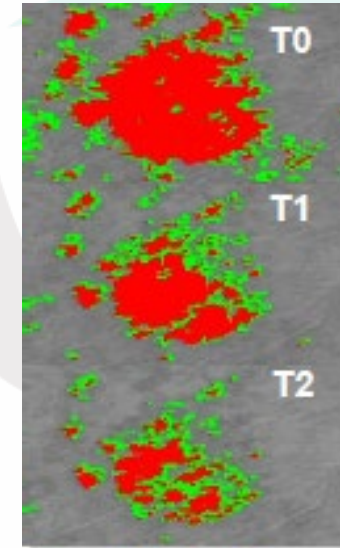
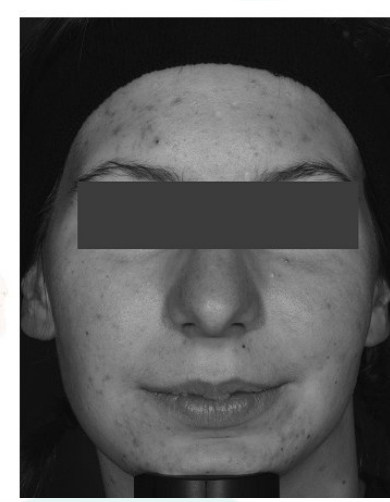
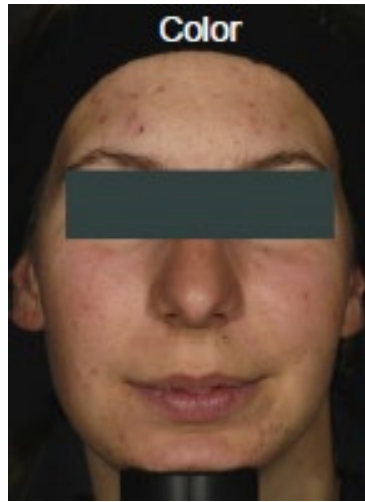


SERVICES: CLINICAL EFFICACY

SKIN PIGMENTATION and COLORIMETRY

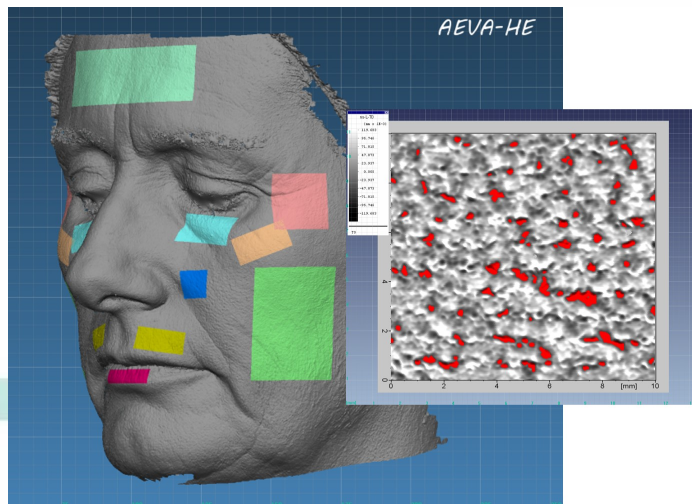
| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE |
|--------------------------------|--------------|--------------|--|--|
| WHITENING SKIN TONE | DC.CL-WH-084 | Skin tone | Color analysis of the skin (RVB-CIELab, ITA°) in whole area | Nikon D5600 FrameScan NG-48 |
| ANTI-DARK SPOTS | DC.CL-DS-085 | Dark spots | Color (RVB-CIELab, ITA°) and morphology (surface, perimeter, regularity, homogeneity, contrast) of spots (pigmentary spots, acne, blemishes, rosacea) in ROI | Nikon D5600 FrameScan NG-48 |
| HOMOGENEITY VASCULARIZATION | DC.CL-HG-086 | Homogeneity | Homogeneity of the skin and global intensity of vascularization or pigmentation (entropy, density, number, mean surface, occupancy rate...) in ROI | Nikon D5600 FrameScan NG-48 |
| BRIGHTNESS | DC.CL-BR-087 | Brightness | Local/global brightness analysis (skin, hair, nails, make-up...) in the Region of Interest (ROI) | Nikon D5600 FrameScan NG-48 Glossymeter GL-200 |
| ANTI-DARK CIRCLES | DC.CL-DC-088 | Dark circles | Color (RVB-CIELab, ITA°) and morphology (surface, perimeter, regularity, homogeneity, contrast) of dark circles under eyes | Nikon D5600 FrameScan NG-48 |
| SKIN TONE SKIN RADIANCE | DC.CL-ST-089 | Skin tone | Skin tone (erythema and melanin) analysis in specific area (melanin, ITA°, RVB-CIELab) | Mexameter MX 18 Colorimeter CL400 |

SERVICES: CLINICAL EFFICACY



ANTI-ACNE and OILY SKIN

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE |
|---------------------------------------|--------------|-----------|---|---|
| ANTI-ACNE | DC.CL-AA-090 | Acne | Acne analysis for bumps and pimples (area, number, circumference, max and min height) | Eotech AEVA-HE V4 FoV S-L with VisioTOP-500 bench |
| ANTI-SEBUM CLEANSING MATTIFYING | DC.CL-AS-091 | Sebum | Sebum content ($\mu\text{g}/\text{cm}^2$) and sebaceous glands (area and number) | Sebumeter SM 815 Sebutix F-16 Image Analysis |
| NON-COMEDOGENIC | DC.CL-NC-092 | Comedones | Visual counting of comedones | Visual Analysis Image Analysis |



SERVICES: CLINICAL EFFICACY

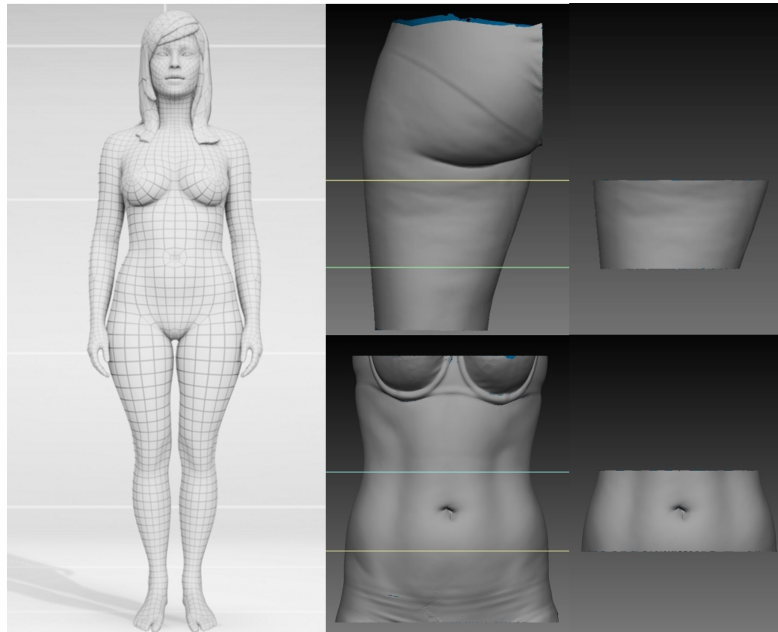
REDNESS, SOOTHING, MOISTURIZING and BARRIER FUNCTION

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE |
|-----------------------------|---------------|----------------------|---|--|
| ANTI-REDNESS SKIN TONE | DC.CL-AR-093 | Redness | Skin vascularization (RVB-CIELab, ITA°) and rosacea in whole face. Skin tone and erythema levels in specific ROI. | Nikon D5600 FrameScan NG-48 Colorimeter CL400 Mexameter MX 18 |
| SOOTHING ANTI-IRRITATION | DC.CL-AI-094 | Anti-irritation | Redness after SLS occlusive patch exposure during 4-5 days in forearm. <i>Untreated or Placebo is included.</i> | Mexameter MX 18 |
| SOOTHING ANTI-ITCHING | DC.CL-AIT-095 | Stinging Test | Application of 10 % Lactic Acid and subjective evaluation of the stinging intensity. <i>Untreated or Placebo is included.</i> | Self-assessment evaluation |
| MOISTURIZING | DC.CL-MT-096 | Long-term Hydration | Moisturizing levels (long-term) | Corneometer CM 825 |
| | | Short-term Hydration | Moisturizing levels (short-term, 24h, 5T) | |
| BARRIER FUNCTION | DC.CL-BF-097 | TEWL | Trans-epidermal Water Loss (TEWL) levels | Tewameter TM HEX |



BODY REMODELING: CELLULITIS, STRETCH MARKS and SCARS

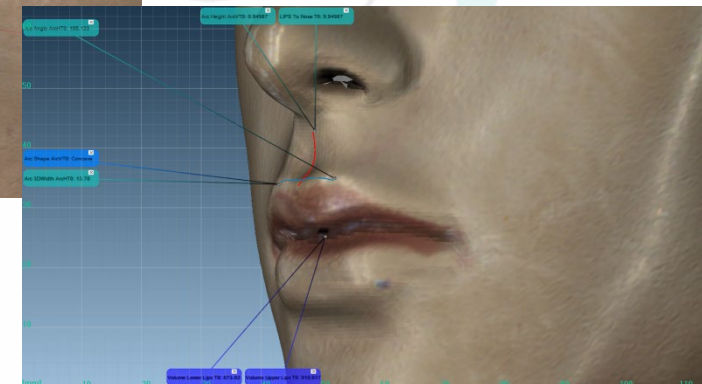
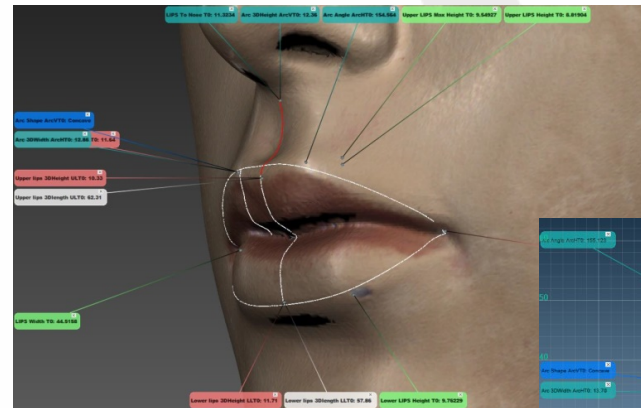
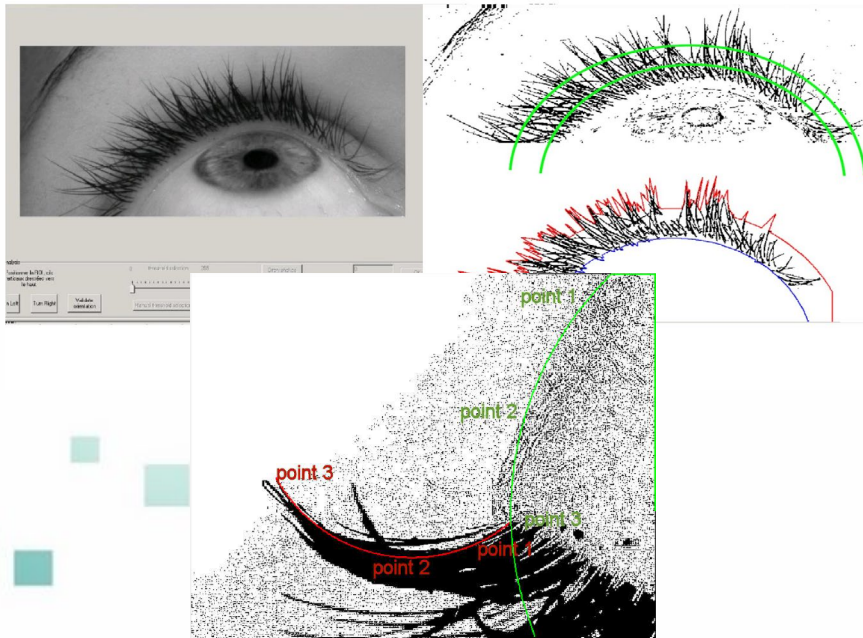
| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE |
|--|--------------|---------------|---|--|
| ANTI-CELLULITIS BODY TIGHTENING SLIMMING | DC.CL-CL-098 | Cellulitis | 3D volume and circumference (thighs and abdomen). Firmness and elasticity analysis included. | Eotech AEVA-HE V4 FoV L with Tripod Manfrotto 475B |
| ANTI-STRETCH MARKS AND SCARS | DC.CL-SM-099 | Stretch marks | Stretch marks and scars (size, volume and roughness) in the Region of Interest (ROI). Skin color (ITA°, Lab) analysis included. | Cutometer Dual MPA 580 Colorimeter CL 400 |



SERVICES: CLINICAL EFFICACY

EYELASHES, LIPS and CUPID'S BOW

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE |
|-----------------------------------|--------------|-------------|--|--|
| EYELASH GROWTH EYELASH DENSITY | DC.CL-EL-100 | Eyelashes | Eyelashes (number, length, width, volume, curvature, elevation, parallelism and aggregates). Real and perceived effects (for mascara). | Nikon D5600 FrameScan NG-48 |
| LIPS VOLUMIZING | DC.CL-LV-101 | Lips Volume | Lips (volume, width, height, circularity) | Eotech AEVA-HE V4 FoV L with VisioTOP- 500 bench |
| CUPID'S BOW REMODELING | DC.CL-CB-102 | Cupid's Bow | Cupid's bow (vertical distance, height, width, angle, shape, amplitude) | |



SERVICES: CLINICAL EFFICACY

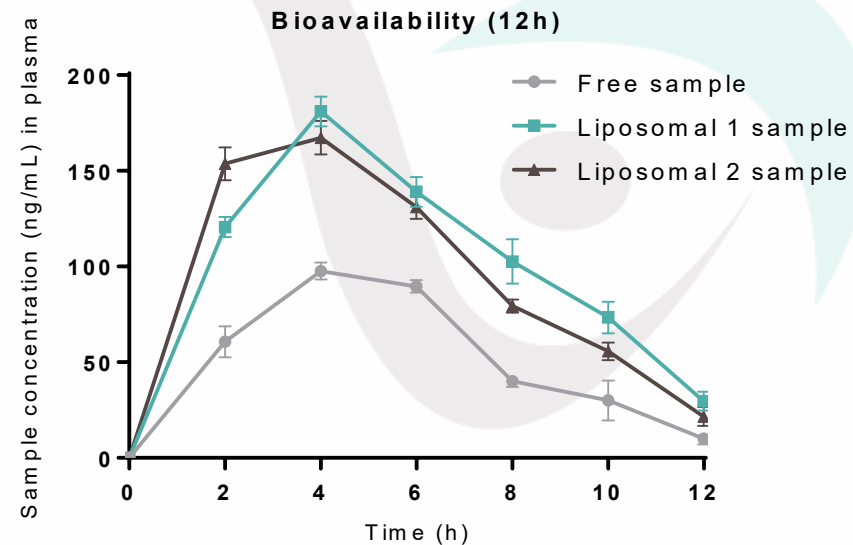
OTHER SKIN PARAMETERS

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE |
|---|--------------|------------------|--|--|
| SKIN TEMPERATURE | DC.CL-ST-103 | Thermography | Skin temperature analysis using infrared | Thermal Camera FLIR A50 |
| COLOR STABILITY & CLEANSING | DC.CL-CS-104 | Color Stability | Measurement of the occupancy of a pigmented product. Color stability and cleansing [make-up, lipstick, foundation cream, eye-liner...] | Nikon D5600 FrameScan NG-48 Colorimeter CL 400 |
| EXFOLIATING | DC.CL-EF-105 | Desquamation | Corneocytes quantification using Corneofix | Corneofix + Image Analysis |
| REGENERATING | DC.CL-RG-106 | Cell Turn-over | Cell turn-over measurement after inducing pigmentation with DHA. | Mexameter MX 18 Colorimeter CL 400 |
| DERMATOLOGICALLY OPTHALMOLOGIC. CLINICALLY TESTED | DC.CL-DT-107 | Use Test | Self-assessment questionnaire + Macroscopic digital images + Dermatologically/Ophthalmologically tested + Clinically tested + Tolerance tested | Self-assessment questionnaire |
| ANTIOXIDANT | DC.CL-AO-108 | Oxidative Stress | Reactive Oxygen Species (ROS) levels using Corneofix | Corneofix + Fluorimetry |
| MICROBIOME | DC.CL-MB-109 | Microbiome | 16sRNA whole microbiome sequencing after sampling with swab (DNA isolation, PCR, library, diversity, Blast, etc.) | Swab + NGS |

SERVICES: CLINICAL EFFICACY

ORAL INTAKE: FUNCTIONALITY & BIOAVAILABILITY

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE |
|-----------------|--------------|-----------------|--|---|
| FUNCTIONAL FOOD | DC.CL-ST-110 | Blood Analysis | Complete blood analysis (cholesterol, glucose, urea, creatinine, uric acid, triglycerides, hemogram...). Biostatistical data analysis is included. | Blood Analysis Vein / Fingerstick UPLS-MS/MS ELISA |
| BIOAVAILABILITY | DC.CL-BA-111 | Bioavailability | Quantification of the tested sample using UPLC/MS-MS or ELISA, after vein or fingerstick blood extraction | |



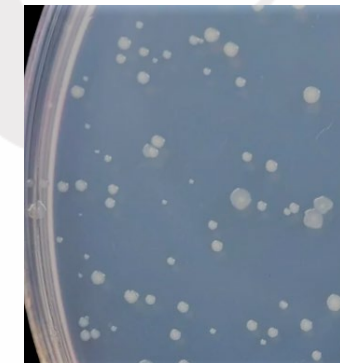
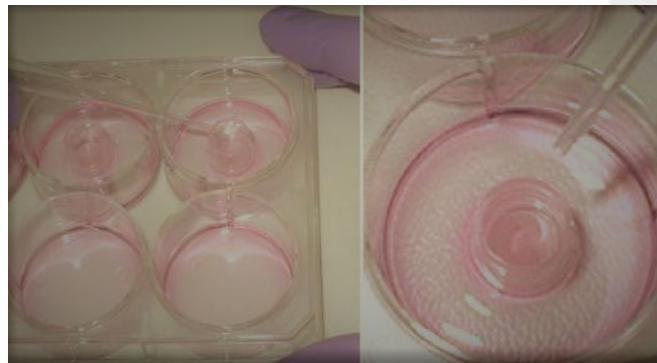
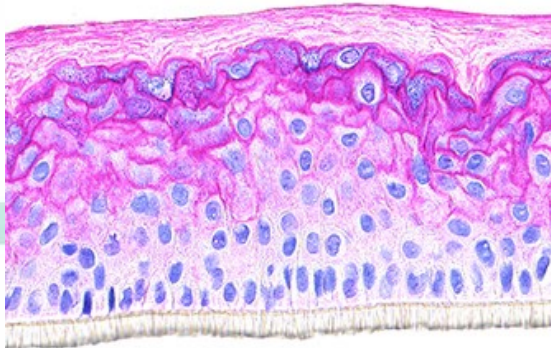
* All of our clinical tests including oral intake are previously validated through an **Ethical Committee (CEIm)** to ensure the safety of the protocol and the tested samples.

IN VITRO SAFETY

Claims substantiation and R&D marketing support

SERVICES: IN VITRO SAFETY

| CLAIM | REFERENCE | TITLE | BIOMARKER | TECHNIQUE | MODEL |
|---------------------------------|--------------|----------|--|---------------------------|---------------------------------------|
| CYTOTOXICITY | DC.SF-MC-070 | MTT | MTT cytotoxicity ECVAM N°17 | Absorbance | All models |
| CYTOTOXICITY SKIN IRRITATION | DC.SF-SI-071 | OECD 439 | Skin irritation (OECD 439) using MTT | Absorbance | RHE RHE FT |
| PHOTOTOXICITY | DC.SF-PT-072 | OECD 432 | Phototoxicity (OECD 432) using NRU | Absorbance | 3T3-L1 |
| SKIN CORROSION | DC.SF-SC-073 | OECD 431 | Skin corrosion (OECD 431) using MTT | Absorbance | RHE RHE FT |
| EYE IRRITATION | DC.SF-EI-074 | OECD 492 | Eye irritation (OECD 492) using MTT or WST-1,8 | Absorbance Fluorimetry | RhCE |
| SKIN ABSORPTION | DC.SF-SA-075 | OECD 428 | Skin absorption (OECD 428) using Franz Cell | Franz Cell UPLC-MS/MS | PigS RHE/RHE FT |
| SKIN MUTAGENICITY | DC.SF-SM-076 | OECD 471 | Ames Test (OECD 471) | Colony counting | <i>S.typhimurium</i> <i>E.coli</i> |



We'll ensure you always get the most reliable results.

CONTACT US

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