

zoom #5

BY SKINOBS

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Claim substantiation and human testing for cosmetics always remain between science & marketing. Marketers feel more and more comfortable with scientific proofs and vice versa. We will meet both those who are present at **Cosmetic360** Paris [booth H29] and **SFI2C conference** in Marrakech, to pursue our collaborative work of testing intermediation. In this newsletter, we will tell you about the assessment of the **cutaneous microbiote** and the **complexion radiance evaluation**. We will also provide news of our partners in instrumentation and testing laboratories.

Happy reading!
Anne Charpentier, CEO

Skinobs platform, a smart way to link claims and testing technologies

1,400 worldwide users, R&D managers, formulators, marketers and regulatory authorities in charge of the claim proof today think that Skinobs platform is a unique **"Who's Who"** that answers all their questions about skin testing: what method, device, CRO's, countries, subjects...?

They can easily find specific and exhaustive data, on all the test types, claim substantiation and subcontractor laboratories (CRO's). To help users efficiently, Skinobs provides in-depth information on existing methods and gives direct access to CRO's requests.

After referencing the major devices and methods for tolerance and efficacy human testing, Skinobs is now growing up with new claim evaluations such as **anti-pollution and microbiote testing**. Give us your feedback at contact@skinobs.com.

Statistics of Skinobs traffic

+1,400
USERS

+3,000
PAGES VIEWED*

+6'18"
AVERAGE
SESSION LASTING

+85%
ENGLISH
SESSIONS

*in July 2017

How does the database accelerate your skin evaluation?

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+ 27 methods

+ 40 CRO's

+ 25 countries



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120 tests

80 CRO's

30 countries

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THE SKIN MICROBIOTA AND THE COSMETICS

100 trillion bacterial cells (microorganisms, bacteria, viruses, fungi, yeasts) are living in our bodies. Everybody wants to know more about the impact of the cosmetics use on the skin bacteria.

The microflora is subdivided in 2 groups:

- the **transient flora**, saprophytic and pathogens microorganisms with *Staphylococcus aureus*, *Escherichia coli*, *Pseudomonas*...
- the **resident flora**, pathogenic and commensal microorganisms with *Proteobacteria epidermidis*, *S. hominis Propionibacterium*, *P. aeruginosa*...

The balance of the cutaneous microflora (500 bacteria species) is dependent of the conditions of its ecosystem: temperature, pH, UV, lipids, proteins, etc. It is mainly influenced by the genetic, the life style

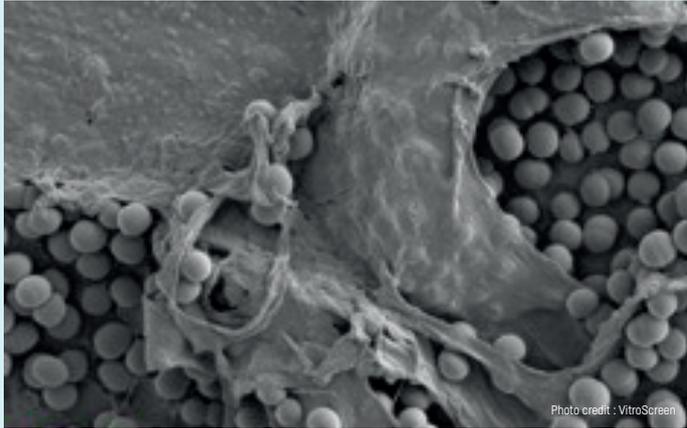


Photo credit : VitroScreen

and the diet. Each person has their own skin flora composition, distributed from the epidermis until the dermis, which is lifelong qualitatively stable, like a **personal microbial footprint**. This microflora is fundamental for **the skin homeostasis** and participates to **the immune and barrier functions**. The cosmetics offer 2 main benefits: the probiotic-like effect and the anti-microbial effect.

What methods exist today to evaluate the cutaneous microbiota?

The important intra-individual diversity of the cutaneous flora is also associated with a high level of inter-individual variability. Thus, the protocols will compare the skin swabbing of the treated zone and of the non-treated or placebo zone, before and after treatment.

Two main diagnosis opportunities:

1. **Counts method at the cell level** by Zurko research

2. **Quantitative methods at the molecular level:**

- PCRs, polymerase chain reaction by Phylogene
- rRNA by DermScan, Dermatec, ProDerm...
- S16 rDNA + ITS sequencing: microbiote and fungi, by Dermatec, Phylogene
- Mass Spectrometry: Cosmepar, Spincontrol...
- High-resolution Nano LC-MS/MS by Phylogene
- Multi-omics approach (mechanism assessment) by Phylogene and Oxyproteomics

The microbiota will play a key role in the cosmetics of tomorrow. We move towards personalized and preventive cosmetics. Claim substantiation will evolve with the regulation and the products development.

Cosmepar strengthens its expertise in cutaneous microbiota



The laboratory develops protocols dedicated to the study of the skin flora by capitalizing on the **local synergy** of its laboratories. The clinical unit of the group relies on its microbiological laboratory to precisely characterize the flora (microbiota) by human swabbing after the product use. The **Tof Maldi's mass spectrometry** allows, on the other hand, to identify

those enumerated flora. Studies designed by Cosmepar's dermatologists, incorporate additional parameters of interest such as the skin pH and the hydration, to **monitor the skin environment around the microorganisms**.

www.cosmepar.fr

Pharmascaan assesses the performance of aesthetic and biomedical treatments



Created in 2001, Pharmascaan is the brand of DermScan Group specialized in clinical studies and **interventional or non-interventional biomedical researches**. ISO 2001 certified, Pharmascaan offers custom made protocols to evaluate the safety, the tolerance and the efficacy of medical aesthetic treatments (rejuvenating, depilation, varicose vein care, cellulite reduction, etc.). In collaboration with renowned medical teams, Pharmascaan conducts studies **on site**

(CRC) and/or in medical offices (CRO). The laboratory manages all the study phases, from the requirement of authorizations to competent authorities to the statistical analysis of the results. Thanks to its high-tech equipment, Pharmascaan proves objectively the interest of these treatments. www.pharmascaan.fr

QACS LAB designed for cosmetics testing activity



The laboratory is equipped with the latest technology and employing numerous experts such as dermatologists, ophthalmologists and cosmetologists. They can handle all kind of efficacy studies to substantiate product claims: "in-use tests" on elasticity, moisture, wrinkles, sebum, whitening, anti-dandruff, non-comedogenicity, ophthalmological and in-vitro testing.

QACS LAB offers **high resolution image analysis, statistical data processing**, to justify product claims and marketing needs. With more than **7 years of experience** in clinical tests, the **laboratory is GMP, GLP and GCP compliant**. www.qacs-lab.com

COMPLEXION RADIANCE OF THE SKIN

Complexion radiance by Skinobs



17 METHODS



37 CRO'S
27 COUNTRIES



10 DEVICE
MANUFACTURERS

Complexion dull, fuzzy, bright... the skin complexion is the parameter that best characterizes our «healthy look». As Mathieu Hébert (Optical Institute Graduate School) reminded during the skin biology workshop (September 12; CED-Lyonbiopôle), **“the radiance is difficult to define in terms of physical measurement** even if every expert gives his own definition”. Indeed, the complexion radiance is related to the surface state and its property is to reflect light. “It gathers **3 elements: light, color and texture**”, as said Agnès Lavoix (Dermatec). And according to Etienne Camel (I.E.C), it should be addressed in an optical way but also perceptual and cultural. These skin care products, focused on exfoliate, increase cell renewal, oxygenate and strengthen the cellular functions while the makeup homogenizes the complexion or brings shine.

Skinobs platform lists more than 15 methods for this claim, in addition to other methods which are consumers testing, clinicians scorages and sensory analysis.

- **Stratum Corneum thickness:** QuantiSquame, Antera 3D, Samba, Visioscan, C-Cube (Pixience), Dermascope, Sonde Raman, Vivosight, OTC, Vivascope® (Mavig)
- **Cutaneous softness:** Frictiometer, Tribology (École Centrale)
- **Epidermal renewal:** QuantiSquame
- **Skin gloss:** Goniolux®, ColorFace, Skin GlossyMeter, SkinGlossMeter, DRS Diffuse Reflectance Spectrometry (DTBS/LISA), Observ520® (Innofaith)

The complexion radiance is a complex parameter to assess, not only because of its several analysis criteria but also because of the inter-individual and the intra-individual variations of the subjects. Moreover, these beauty products should be evaluated specifically on each ethnical group (African, Asian, Caucasian) due to their specific skin physiology, and under extreme reproducible environment conditions.

Assessment of cell renewal by Cerco



The epidermis is constantly renewed. Time cell renewal is about 28 days for a young person. It is a natural process in direct link with the desquamation of the corneocytes and the elimination of dead cells. It also helps improving the **complexion radiance**, to smooth the skin texture, eliminate imperfections and oxygenate the skin. When ageing, the cell renewal slows down but cosmetics can improve this effect by increasing the desquamation of surface. Cerco has since always a **robust and specific protocol** to follow the corneocyte renewal using a marker (fluorophore) combined with image analysis. It allows to visualize and quantify the acceleration of the corneocyte renewal after a cosmetic treatment. www.cercotests.com

IEC acquires two new imaging devices



IEC is completing its instrumental park with 2 ColorFace® from Newton, one for its South-African and one for its Asian subsidiaries (Singapore and China). It complements the imaging devices available within the group (HeadScan® V04 table, Orion, Visioface®, Monaderm), to realize **standardized multi-modalities full face image** acquisitions thanks to a 24 Mpixel sensor. Moreover the cloud connection allows a real-time image quality checking and a fast transfer for analyses. This provides new opportunities in the study of **anti-aging and whitening** products especially, with up to 5 modalities (cross, 30°, 60°, parallel to normal polarization) and dedicated advanced software analyses of **full resolution images**. A specific UV light acquisition also allows porphyrin analysis, being of particular interest in prone to acne Asian skin studies. www.iecfrance.com

Spincontrol, expert of CLBT analysis for complexion radiance



This method is the only in vivo published method to date (C.Musnier, P. Piquemal, P.Beau and J.C. Pittet-Visual evaluation in vivo of complexion radiance using the C.L.B.T.™ sensory methodology, Skin Research and Technology, 2004). Almost **150 studies allowed** to validate the reliability and sensitivity of this method based on the analysis of **seven descriptors** and to improve it by developing a **global radiance index** for Caucasian, Indian and Asian skins. Spincontrol also offers a complementary method based on image analysis by studying the interaction of the diffused and retro-diffused light. Complexion radiance and pollution being intimately linked, Spincontrol associates with one of its partners to provide a protocol allowing to prove preservation of the cutaneous microbiota. www.spincontrolgroup.com

Partners key figures

3

new labs in 2 years by QACS LAB

3rd

is the next version of Aeva software of Eotech

100

high-tech devices used by DermScan Group

104

samples from subjects analysed by Lipotype

135

efficacy devices in IEC Group

150

complexion studies by Spincontrol

210

cell renewal studies by Cerco

1,000

samples analyzed by Oxiproteomics for its index creation

180,000

analysis implemented by Cosmepar in 2016

Agenda

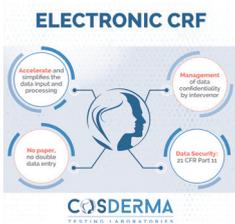
05-06 DEC. Jean-Paul Marty Days Paris

09-10 JAN. Cosmetagora 2018 Paris

News

Read the latest news on cosmetics testing. Subscribe to the online Newsletter:
www.skinobs.com/news

e-CRF is coming by Cosderma !



For more than 10 years, the Cosderma Laboratory has been significantly investing into its both sites in Bordeaux and Wuhan (China) to improve both performance and quality of **the efficacy and tolerance** testing. As early as October this year, Cosderma will be implementing the use of e-CRFs for all the studies performed in France to guarantee a higher than ever **level of safety in the data input**. This application, used by numerous University Hospital Centers, has been certified 21 CFR part 11. www.cosderma.com

Eotech presents its new device: the Vision'Hair 3D



Eotech company presents for the first time, at Cosmetic360, a system capable of **measuring hair volume in vivo** and even more: the **Vision'HAIR3D**. This new concept confirms the company strategy to extend collaborations with new partners and to always offer innovative solutions for life sciences, followed by a new visual identity and logo. They already announce their collaboration with **JenLab** to propose for sales or rental their **Multi-Photon confocal system MPTFlex** designed to measure skin age or anti-solar product penetration for instance. Next year will be very rich in new products... but we should remain patient! www.eotech.fr

Eurofins acquires Dermatest, the Australian suncare CRO



Dermatest, founded in 1997, is the leading sunscreen and skin care evaluation laboratory in Australia. The laboratory and its CEO, John Staton, are recognized internationally for their active role in the definition of **International Sun Protection Standards**. With 2.54 billion euros in annual revenues and over 30,000 employees in around 375 sites in 41 countries, Eurofins Scientific is a leading international group of laboratories providing a unique range of **analytical testing services** to the pharmaceutical, food, environmental and consumer products industries and to governments. www.eurofins.com/cosmetics

Innofaith introduces a new digital skin evaluation technology that will boost innovation



The new OBSERV® RD is especially designed to detect and explore even the **subtlest cosmetic effect**. It opens new pathways to explore and evaluate new cosmetic treatments by relevant photographic evidence. The OBSERV® RD is equipped with **diffuse daylight, polarized light, various UV fluorescence** illumination technique modes and with an innovative directional illumination system combined with new digital imaging and processing technologies. These advanced technologies reconstruct the skin surface in 3D and thereby allow the system to interpret the light interaction with the skin independently to the morphology of the face. www.innofaith.com

Skin lipidomics by Lipotype: a skin aging tool at the molecular level



The lipid composition of human skin is essential for its function. However the simultaneous quantification of a wide range of skin lipids, belonging to both Stratum Corneum and sebum, is not trivial. They recently developed a new **"shotgun" mass spectrometry-based** method characterized by a broad coverage of lipids, absolute quantitation, high reproducibility and high-throughput providing comprehensive insight into skin lipid composition. They applied this method in a large-scale study of natural lipid variability of human skin with 104 subjects' samples analyzed, both sexes and different ages. They discovered gradual **changes in the skin lipidome** correlated with age but no sex-specific differences. Their new method enables detailed and broad insights into skin lipidomes, both in terms of lipidome coverage and sample number. www.lipotype.com

VivaScope® by Mavig, ideal for complexion studies



The confocal laser scanning VivaScope® microscope allows to investigate skin in detail, like histology. However, the big advantage of this technology is that it is **non-invasive**. As the imaging, using a VivaScope® is **very quick and real-time**. The images captured with a VivaScope® reveal the cellular pattern without obstructing the tissue. Thus, the skin can be monitored over long periods. This microscope can reach down to the superficial dermis and is ideal to examine skin-aging, melasma, lupus, vitiligo or psoriasis. For the complexion, the VivaScopes are ideal to study complexion of the human skin as **melanin caps of melanocytes** can be directly observed. www.vivascope.eu

The Skin Rejuvenation Factor by OxiProteomics



For innovative approaches to support anti-aging claims, OxiProteomics offers the **state-of-the-art on efficacy testing**. After conducting a **meta-analysis of 1,000+ skin samples** using proprietary technologies, OxiProteomics has developed a **skin quality index**, based on its **protein oxidative status**. This index provides a **quantitative ranking of the skin status at the molecular level**: ranging from young healthy proteins to old damaged proteins, a target to battle for efficient cosmetics treatment. Supported by a wide dynamic range, accuracy, coupled with their **experimental models of pollution, blue light or UV induced damage**, this index ensures reliable data for determining ability of actives or finished products to **protect or reverse the negative effects** of pollution, HEV or UV irradiation and aging. www.oxiproteomics.fr

They have placed their trust in us

Académie - Aesop - Aiglon - Akott - Ales Groupe - Alpol - Arome Pacific - Aseptia - Avon - Basf - Beyer - BCM - Beiersdorf - Bioderma - Biolie - Boots - Bulgari - Capsum - Cattier - Chanel - Clariant - Clarins - CLR - Codif - Coptis - Cosmebio - Coty - Croda - Dipta - DSM - Dupont - Evonik - Expanscience - Exsymol - Fiabila - Filorga - Galderma - Gattefossé - Greentech - Gyaudan - Groupe Batteur - Guerlain - Hermès Horméto - Idilio - Indermé - Ingrid-Millet - Isdin - Johnson & Johnson - Kanebo - KDC - Kialab - Kobo - Laboratoire Gilbert - Laboratoires Ganévrier - Laboratoire Rivadis - Lea Nature - Lipoid - Lipotec - L'Occitane - L'Oréal - Make Up For Ever - Marionnaud - Mavala - Merck - Mibelle Multifair - Naos Natura - Naturex - Nikkol - Nuxe - Omega-Pharma - Oriflame - Panther - Payot - Procter & Gamble - Philips - Pierre Fabre - Provital - Puresential - Rahm LVMH - Romy Paris - Rossow - Sanofi - Sederma - Sensib - Sephora - Seppic - Shiseido - Shoyz - Sical - Sileb - Sislei - Solabia - Sothys - Strand - SVR - Symrise - Syntivia - Thalgo - Thor - Version Organique - Weckerle - Yves Rocher - Yves Saint Laurent...

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