skinobs
Testing Sourcing **for Cosmetics**

ZOOM
BY SKINOBS **#10**

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2018 was an intensive year for Skinobs development regarding Human testing for cosmetics for both its Platforms and its Newsfeed. We have attended the main scientific conferences worldwide which helped us to improve our knowledge on the clinical testing fields. Globally, it seems that the ultimate Grail is the **visual and quantitative evaluation** coupled with **data treatment algorithms and modelling**. In this Newsletter we will focus on the wrinkles evaluation and propose a keynote of the IFSCC & SFI2C conferences. Then we will present you the latest innovations of our partners: Cerco, CosmetikWatch, Eotech, Eurofins, Eurofins Dermscan, HCS Pharma, I.E.C, Intertek, Microfactory, Newtone and Phylogene. We will be glad to answer your questions about testing at the next Cosmetagora [Booth 79], the JED and the COMET conferences.

Happy reading!

Anne Charpentier, CEO

Skinobs an Innovative Bridge Between Science and Marketing

During the year 2018, Skinobs has answered testing questions about **Microbiote**, **Anti-pollution**, completed the **Sensory Analysis** side and referenced the Haircare objectivation.

It reflects the state of the art in the latest innovative devices and methods to objectivate the efficiency of personal care products. It also details the classical testing, independently and comprehensively, using a map and several filters to optimise the obtained results. Our approach has always been collaborative, integrating information from all stakeholders to build a useful and easy-to-use tool for all cosmeticians. The free login to the Skinobs database, in 2 clicks, enables the testing manager to have a 360° vision of the claim substantiation.

Let ask specific requests and give us your feedback at **contact@skinobs.com**

How does the database accelerate the Radiance of Complexion evalutation ?

For testing the efficacy of Radiance of complexion you find in the results search:

| + 7 Methods | + 30 CRO's | + 7 Devices Manufacturers |

Discover
250 tests
70 claims
30 countries

Statistics of Skinobs traffic

| **+2200** CONNECTED COSMETICIANS | **+400** USERS* | **+12%** USERS* | **+20 000** PAGES VIEWED* |

*November 2018 | *compared to same period 2017 | *in the year 2018

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WWW.SKINOBS.COM

A WORD OF EXPERT

Jean-Marie SAINTHILLIER
Ingénieur de recherche
Skinexigence

As soft as it may be, human skin is not a flat surface, it has a relief, which is organised in a relatively uniform way into a system of **wide and deep primary furrows and transverse secondary** more superficial fine lines. The function of this network is first, to allow a **protective mechanical extension** in the direction of the stresses on the skin but also to help both the diffusion and the retention of sebum and sweat.

The skin of the face is a complex relief, with a combination of **micro and macro** relief, resulting from structural changes in the epidermis, dermis and hypodermis with age. This macro relief is composed of fine lines (0.2 - 1 mm), wrinkles (> 1 mm) particularly on the forehead (glabella wrinkle), crow's feet, even later on the cheeks and folds.

Due to the difference of magnitudes (µm to mm), these reliefs must be quantified in different ways. The wrinkles can be assessed following **3 methodologies**: **trained assessors** evaluation via scores, **standardised photographs** and **3D analyses by fringe projection** or stereophotographies.

WRINKLES OR NOT WRINKLES

© Skinexigence

Wrinkles, Peaks and Valleys

Brands communication is always on the lookout for new techniques for highlighting anti-wrinkle results. The measurements of the skin profilometry are a sort of skin mapping of the peaks and valleys. Naturally, this claim substantiation brings back to the objective analysis of the skin surface and finally to the roughness and the wrinkles measurements. The several lines, folds or creases zones of the face and the neck can be defined as anatomic reference points for assessment of wrinkle depth. There are about eleven areas for static (at rest) or dynamic wrinkles: horizontal forehead, glabellar frown, periorbital, preauricular, cheeks, nasolabial; upper radial lips, lower radial lips, corners of the mouth, marionette, labiomenta, horizontal neck. Generally, the common target is the crows foot area around the eye.

What claim can be supported? Reduce lines, erase wrinkles, diminish creases or decrease folds with short or long-term effect. It may concern skin care and make-up with biological performance or optical and soft-focus effects Important is to define.
Except the indirect methods analysing the print by profilometry, and the consumer tests, here are the main direct methods available today?

1. Scores and grades
There are numerous existing scales (0 to 5 or 0 to 9) to quantify the number and depth and qualify the appearance of wrinkles. The evaluation can be performed by an evaluator and the subjects and used for the pre-inclusion of the subjects. The objectivity of the method is mainly due to the photography documentation and the correlated grades. The famous one is the Roland Bazin and Eric Doublet Atlas of the cutaneous ageing with 6 to 8 grades and 8 types of wrinkles.

2. Standardised photography provides global information as well as objective support and traceability. It has evolved a lot in recent years and today image capture systems and dedicated software are available. Filters (specific polarisation) can enhance the visibility of the skin relief. Devices available: Antera 3D (Miravex), C-Cube (Pixience), NeoVoir II (C-Lab), TIVI 90 (Wheelsbridge), VisiaCR (Canfield), VisioFace (C+K),

3. Shadow and grey level analysis
Acquisition by photography or videomicroscopy. Several parameters of the wrinkles are calculated such as: the total surface, the number, the total and average length, the average depth, the distribution of the wrinkles per class. Devices available: VisioScan (C+K)

4. 3D fringe projection analysis
Several parameters of surface roughness including: Rt, Ra, Rmax, Rz, Nr, Sn, Lo, Wt and also morphological parameters : surface, volume, maximal or average depth of the wrinkles. Devices available: AEVA-HE 110, Dermatop-HE (Eotech), Primos (Canfield)
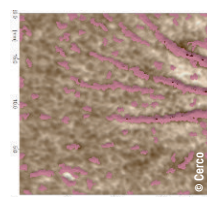
5. 3D images and data modelling
This technology represents the new trends of wrinkles analysis with the opportunity of 3D reconstructed images and average images. Devices available: ColorFace (Newtone Technologies)

How can we detail what are the main challenges, of this evaluation? The repositioning with the exact position and face expression is maybe the first one, the size of the measure range, the accuracy, the duration, the contactless, the inclusion of the subjects.
As for other claims, the wrinkle evaluation is dependant of the ethnic origin. At the latest Jean-Paul Marty Days, Pr Paul Matts, P&G, gave a very interesting presentation about the **relativity of the number and the depth of wrinkles in different ethnic groups**. Hopefully, there is no unique method considered as gold standard. It's a multi-criterion choice including marketing needs and scientific objectivation.
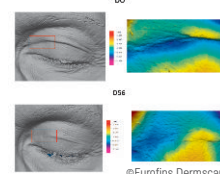
Wrinkle assessment by the Cerco

© Cerco

For 40 years, CERCO has been studying skin relief; Wrinkles are the first visible sign of aging and there are several methodologies to study the furrows to the finest deep. The choice of the methodology is a major issue in the evaluation of anti-wrinkle effect: The analysis of 2D images, the clinical scoring, the Profilometry 3D with or without contact has characteristics to be taken into consideration; The finer the wrinkles, the more the methodology must have a high sensitivity. The measurement kinetics is also a determining factor in defining the most appropriate methodology. **www.cercotest.com**

Eurofins Dermscan evaluates the lifting effect on eyelids

D0

D56

©Eurofins Dermscan

With age, the skin of the upper eyelids becomes loose. Some cosmetics dedicated to the eye contour claim a smoothing and/or a tightening action of the eyelid, in order to reverse the tired appearance and rejuvenate the look. To meet these claims, Eurofins Dermscan performs some roughness (Ra) and fold height (Rz) measurements of the upper eyelid directly in vivo, using the DermaTop® Fringe Projection System.
A decrease in Ra (µm) reflects a smoothing effect; a decline of Rz (µm) reflects a tensor effect. As an illustration, an example of effect is presented below after 2 months of twice-daily application of a dedicated eye contour. **www.eurofins.com/cosmetics/**

KEYNOTE OF THE IFSCC CONFERENCES

September 2018 - Münich

In recent years, the knowledge of the hair and skin's structure and function has rapidly increased. Insights into the complex processes of physiological skin aging due to extrinsic or intrinsic reasons, "if we consider the skin as "an **interface between the organism and the environment** and if we take the findings of physics and chemistry interfaces into account, new approaches are opening up." Said Leonhard Zastrow to open the 3-day conferences.

The following questions must be considered: How are, e.g., the **defence systems against radiation, free radicals and bacteria maintained and organized?** Is external treatment capable of compensating any systemic undersupply and how?

The numerous presentations and posters gave an idea of the recent researches on various cosmetics field enabling the support of claims following innovative in vivo, in vitro or ex-vivo methods for both hair or skin topics. We have summarized the incredible panorama in 3 subjects:

1. **The mecanisms**: Glycation and AGEs, carbonylation, all radiations, endogenous antioxidants, dermal-epidermal junction, vascularity, lipid lamellae density, hormones influences, skin microflorae, imbalanced autophagy, skin hydration, DNA damages, cell-cell adhesion and tight junctions and of course anti-ageing.
2. **The main impacts**: the modern exposome and particularly the photodamage with the new ennemy of the Blue light, the oxidative, psychological and emotional stress…
3. **The innovative methods**: The Raman spectroscopy, the transcriptome analysis, the proteomics analysis, the reflectance spectroscopy, the optical coherence tomographic angiography, the in vivo confocal… among others.

These international conferences where reach of transversal approaches of **skin and hair science**. The **pollution impacts on the skin and the increase of the sensitive skin phenomena** were highlighted. Regarding the testing field, we see the evolution of the development of **in vitro methods alternative of Human in vivo** even for efficacy testing. The new SPF testing, e.g, using HDRS - Hybrid Diffuse Reflectance Spectroscopy is a good example of these trends.

Newtone: Imaging health and beauty

©Newtone

To investigate wrinkles, Newtone provides all in one solution, starting with **ColorFace**, the first full face skin acquisition system, under specific lighting mode, easily used in clinical trials. The combined **CiPaaS** solution offers direct automatic and secured transfer of images wherever the study takes place, all over the world. As regards the image analysis, Newtone's original approach is to prove product efficacy correlated with human perception, with smart algorithms. Besides, the **PhotoScale** solution, the last developed pictures pair comparison tool for high quality and agile clinical grading, comes completing the computerized analysis. Finally, concepts of machine learning being very promising in the evaluation of skin parameters, based on acquired images, Newtone I**A team** worked on development of **automatic grading for criteria such as wrinkles,** a promising approach for panel recruitment support or efficacy prediction.
www.newtone.fr

Anti-wrinkle a major activity of evaluation for the IEC centers

©IEC

The demonstration of effects on wrinkles remains a major activity in the field of evaluation for our **IEC Centers in Europe, but also in ASIA** (JAPAN, SINGAPORE, KOREA and CHINA) and in SOUTH AFRICA in seasons reversed.

Clinical demonstration **based on atlas and instrumental techniques**: shadows analysis of silicone replicas that are still in high demand (Quanti-Rides™ station, Monaderm), direct Fringe Projection measurements (Dermatop™ Eotech), 3D analyzes of facial wrinkles (AEVA-HE™ Eotech), 50 MHZ ultrasound measurements of the dermis (Dermcup™, Atys Medical) analyzed by Orion-Concept … A stimulating cocktail of methods to meet **local and international regulatory requirements**, scientific communication needs and of course expectations of consumers!
www.iecfrance.com

Pay attention to the lip wrinkles by Eurofins

©Eurofins

Lip volume loss and lines around the mouth are some of the earliest signs of aging. Some products claim to **prevent, reduce or eliminate lip wrinkles and lines.**
To substantiate lip claims, Eurofins | CRL uses the **Clarity Research 3D System**. This technology combines cutting edge 2D and 3D capabilities by utilizing front & side scans to create a high-density mesh model to digitally analyze the lips. This measurement capability improves recognition of features and provides precise information on lips condition. As illustrated, wrinkles on lips are represented as fine lines in light blue and deep lines in blue. Counts are classified by severity. www.eurofins.com/cosmetics/

Partners key figures

1
hour only to test efficiency of antiperspirant formulation by Microfactory

6
new validated in vitro cosmetic assays by HCS Pharma

15
clinical testing laboratories in the worldwide network of Eurofins Cosmetics & Personal Care

23
years of clinical cosmetic Expertise by Intertek

+70%
subjects registered in the national panel by the CERCO

115
Hydration studies per year at the Eurofins Dermscan centers

1000
FibroTx sold in 2018

10 000
sheets in the database of the competitive intelligence solution by CosmetikWatch

27 000
silflo prints analysed to substantiate anti-wrinkles claim by IEC

Agenda

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

Microfactory: A new way to go further in measuring the effects of liquid resistance

To you who are interested in quantifying the performances of cosmetic products, we offer a new way to go further in measuring the effects of water, sweat and sebum resistance. Microfactory has developed a **biomimetic artificial pore** which allows to visualize what takes place inside pores. Today, Microfactory's team has made the application of their method to **antiperspirant efficiency tests** and they work on other applications for make-up and suncare products. Here is a survey, https://lnkd.in/gHKpH2k, about the potential other applications of Smart-Pore™, the first artificial and transparent pore for efficiency tests, has been developed by Microfactory SAS. If you are aware about innovative tests, please help them to fulfil it! Coming from this study, they will organize a breakfast discussion. Do not forget to leave your email if you wish to be invited. www.microfactory.eu

Cosmetikwatch® is The competitive intelligence solution
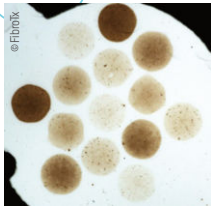
This database is listing innovative cosmetic launches on the cosmetic market since January 2012 in all categories and all distribution channels combined. It allows access to nearly **10 000 sheets** of marketed finished products through a multi-criteria search engine (name, brand, product type/galenic, claims, ingredient list, effectiveness tests, tolerance tests, cosmetic category, distribution channel, labels, PAO, Made in, etc.). Thanks to its **data export function**, it offers the possibility to transfer the data in an Excel spreadsheet in order to make presentations, statistics, graphics, market studies… Try It Out! Register for a free 15-day trial of our professional database. www.cosmetikwatch.com

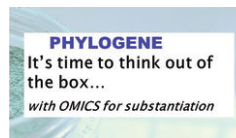## Eotech presents FibroTx with new possibilities and still as simple to use

TAP patches propose 4 to 6 bio markers pre-arranged on a membrane which will be in contact with the skin and be analysed for its biologic response using a specific **Elisa test**. Two new products have been launched to complete TAP range: Swap uses a stamp to **collect proteins** on the skin which will be analysed by a classic Elisa Test afterwards with dedicated bio markers. Collection TAP is another alternative to **collect as swap as a patch**. Wich interest? As simple as TAP but with much more markers and more dedicated analysis like **direct hyaluronic acid** measurement for instance. www.eotech.fr

Phylogene: A comprehensive «free of hypothesis» analysis of the effects of cosmetics.

With the **"omics" and bioinformatics analysis**, Phylogene offers a broad and « free of hypothesis » evaluation of the effects of cosmetics **on the skin and/or its microbiota** :
- Evaluation of the effects of cosmetics by mass spec proteomics and complementary bioinformatics analysis with CORAVALID™.
- Evaluation of abiotic stresses (UV, blue light, pollution) complementing the above approach by RedOxMics™ analysis.
- QPCR (targeted) quantification of major genera / species of the microbiotas.
- Comparative metagenomic study of the microbiome by NGSequencing 16S rDNA and / or ITS.
- Comparative functional metaproteomic study of the microbiota and the skin by nanoLC-MS/MS proteomics and data complementary bioinformatic analysis by CORAVALID™ and MicroXplore™

http://ms.phylogene.com - http://www.phylogene.com

HCS Pharma: cellular microscopy for in vitro efficacy testing

HCS Pharma is a company specialized in *in vitro* **preclinical research** and offers innovative assay for the objectification of your cosmetic ingredients. We provide high value services from **primary cell culture in 2D to complex 3D models**. Our assays are based on high content technologies in automated microscopy and image analysis to provide you with **quantified cell-by-cell results** with meaning full images for your marketing. **www.hcs-pharma.com**

With Intertek, aesthetics professionals guide you to test your products!

Intertek Clinical Studies develop its offer in the aesthetic professions, offering new studies to evaluate the safety and efficacy of cosmetic products, cosmetic devices intended for professionals or requiring their expertise in the context of the study (assessments, advice…). Our team, including **beauticians, spa practitioners, hairdressers, barbers, nail technicians**, provides its know-how, expertise, recommendation to develop study protocols and manage the technical implementation, particularly with the gestures or application routines specific to their profession. www.intertek-france.com/etudes-cliniques

The New Skinobs Platform is Preclinical

Models | Mechanisms of action | Methods

This portal dedicated to pre-clinical testing is currently under development.
You will find your testing partners for the safety and efficacy assays on skin explants, monolayer or 3D cells, reconstructed skin models or 3D bioprinting skin.

Pre-register to be informed of the launch on www.skinobs.com

Skinobs map: a worlwide view of your testing partners

more than **100** CRO's
more than **35** device manufacturers

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