

zoom #12

BY SKINOBS



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1st July is the date for the new version (v8) of the **European Regulation for Cosmetics** to be back on center stage with the implementation of new rules for: **"without" claims, sensitive skin, hypoallergenicity, and of numerical results.** In addition, it recalls that all product claims announced must **prove their veracity** either by using consumer tests, clinical, sensory, emotional or biometrological studies. In this newsletter we speak about **clinical scorages and about the objectivation of slimming products.** Then, we share the latest news of our partners' instrumentation and testing labs: Cerco, CIDP, Dermatec, Eurofins DermScan, Eotech, I.E.C, Intertek, Microfactory, Newtowne Technologies, Orion, Phylogene, Zurko Research. We will see you at the **D.I.I.P Days 19th & 20th September** in Tours to attend the conferences and demonstration workshop of devices for cosmetics on human.

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Happy summer!
Anne Charpentier, CEO

What's inside ?

The free login to the Skinobs database, enables the worldwide cosmeticians to, in 2 clicks:

- Find the right partners for your claim evaluation,
- Directly send an email to the testing Lab to get further information.

Skinobs platform is today an **international database** with a proven expertise **which represents a unique synthesis** about clinical testing and instrumental objectivation on human for skin and hair analysis. Cosmeticians can retrieve classical or innovative tests. Thanks to a collaborative work with the stakeholders, we present you the latest testing services referenced of:

- CTC, Centro de Tecnología Capilar, Spain
- Bionos Biotech, Spain
- Kosmoscience, Brazil
- Labex in Spain
- Olfasense, Germany
- Repères, Paris
- Sensenet, France
- SP Equation, France

Log in now for free to access the search or send us your specific request directly at contact@skinobs.com. We will be happy to provide you special advice. Just let us know what testing you need, and we'll help you to find the right ones!

Accelerate your search on Soothing effect:

The "clinical" platform proposes the following results:

+12 Methods **+ 38 Testing labs** **+ 30 countries**

Statistics of Skinobs traffic



*in the last 6 months

*in the last 6 months

*average session lasting since Jan. 2019

*in the last 6 months

The Cosmetics Industry has lost in April a trusted scientific consultant, and a great professional, **Marie Alice Dibon**. In January 2018, she was the 1st contributor to the SkinObs "Expert Words" session of the Zoom with an article around the **skin microbiota**, one of her favourite topics since 2012. She was one of the first individuals to recognize the importance of the microbiome in cosmetics. Marie-Alice held a master's in industrial pharmacy (Lyon-IPIIL) and a doctorate in Pharmacy (Lyon-ISPB). Since 2000, she led Alice Communications Inc., a consulting company, servicing the biotech and beauty industries in marketing, communications and innovation services. She had a huge impact among all who had the privilege to meet her. She will be dearly missed by the scientific community.



THE PRECIOUS VALUE OF THE CLINICAL SCORES

Why clinical scores are suitable for the performance evidence ?

The clinical evaluation methods by a trained expert or a dermatologist enables the **objective visual and tactile quantification** of the several clinical signs present at the skin or hair surface using referenced pictures and/or scales. In this case, the **“eye” and the fingers** are the instrumental devices. We can find numerous scales and atlas but there are **no norms** and anyone, sponsor or investigator can **create its own scale** referencing pictures with the adequate grade. However, since more than 10 years, there are specific atlas published such as the well-known **“Bazin” ones** that everyone consults for the **ageing evaluation** and subject inclusion. They exist for several skin types: Caucasian, Afro-American, Indian and Asian. The clinical score is a global approach which can be doubled by photographs of the subjects [face, profile] which can be scored in double blind, before and after treatment and classified by **naïve or experts’ panel**. The disadvantage of the picture score is the 2D format, the variation of the type support, the absence of a dynamic... But it is an interesting method because of the flexibility it offers [assessor type, timing] and especially for the application of **AI algorithms and modelling**.

What referenced scores for what claims ?

For some claims, there are scales which are generally used; this list is not comprehensive. We know that some parameters are more difficult to evaluate by the experts.

- **Moisturising effects:** Analogue visual scale; ODSS Overall Dry Skin Score; SRRC Specified symptom sum score. The dry skin/ichthyosis area and severity index [DASI]...
- **Skin ageing:** Lemperle classification, Carruthers scales, Kappes & Elsner scoring, the famous “Bazin Atlas” co-authored by E. Doublet, F. Flament, F. Giron, V. Rubert...
- **Complexion radiance:** one of the most difficult score, CLBT [JC Pittet] scoring for colour, luminosity, brightness and transparency for Caucasian and Asian skin.
- **Colour:** Skintone [Pantone] scale
- **Body morphology:** 2 scales for body-images [Gardner and al.], Body shape Questionnaire [Rousseau and al.], Body-image assessment scale [Thompson and al.]



- **Cellulite (photograding):** mechanically-accentuated microrelief of thigh skin [Perin and t al.], photo scale of Skin roughness using oblique light [Bielfeldt and al.], photonumeric cellulite severity scale [Hexsel and al.]
- **Other topics:** all the visual aspects of the skin such as erythema, black spots, lightening, whitening, greasy skin, redness, make-up lasting, prone to acne skin, sagging of the face, softness...

What are the considerable advantages of the scores ?

- Global 3D **in life** visual and tactile **expert evaluation** including qualitative and quantitative aspects: surface, size, numbers, intensity...
- **Easy, cheap and quick** to conduct
- **Predictive and sensitive** tool

The challenges of the clinical scores: beyond repeatability and reproducibility

- The precise **definition of the criteria** for each product claim with the characterisation of the entire process,
- The **training of the evaluators** to reduce the inter-assessor variability,
- The **conditions of the test:** lighting, positioning, distance of the subjects and the evaluator, colour of the clothes, the hair style. The Evalux bench [Orion concept] is recommended.

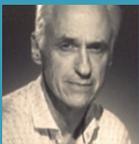
When conditions are met, the clinical evaluation is a good **predictive tool** because of the **sensitivity and the precision** of the human analysis combining knowledge and experience. It gives elements to better understand the product effect which is not always demonstrable by the instrumental devices. This method seems to give **closer results to the consumer tests and be generally coherent with other methodologies**.

Good news! **AI is around the corner** and brand intern labs, CROs and devices and software manufacturers are focused **in the learning process of neural networks**. The training of the AI system with tens of thousands face pictures of multi-ethnic panels allow an **automatic grading made by the machine**. Then, the sophistication of the Smart phone sensors and the **augmented and virtual reality systems** make any innovative tool in this field relevant, simple and accessible: consumer Apps [ModiFace, MDAcne...] and connected objects [OTSTC Skin diagnosis, smart mirrors, CareOs, Cutitronics, Skin UV or pH track, MaskID, Spotscan, Haircoach]...

The demand for personalized diagnostic coincides with the smart technologies’ diffusion. It will give the opportunity to the consumer to be more and more her “self-assessor” of **the perception of her appearance**. To achieve this numerical evolution the expertise of the “clinical experts” is really needed. The clinical score never dies !

Interviews June 2019: Agnès Lavoix (ceo, Dermatec), Anne Sirvent (Scientific communication manager, Eurofins-DermScan), Jean-Christophe Pittet (ceo, Orion Concept), Jean-Robert Campos (Scientific Director, I.E.C), Dr. Clotilde Trarieux-Fourault (Dermatologist investigator department manager, Eurofins), Dr. Drouault (Dermatologist investigator, Intertek), Roland Bazin (Consultant).

A WORD OF EXPERT



Dr Yorik DROUAULT
Dermatologue - Intertek

Halfway between instrumental [objective] and self-assessment [subjective] measurements, the clinical score plays an **important role in the evaluation** of cosmetic products. A good evaluator must have an **‘aesthetic’ sensitivity, a good reproducibility and be trained** in order to be able to assess the more or less tenuous effects of a cosmetic product. Depending on the product being studied, it is important to **discuss upstream the definition of items to be scored. Any type of scale** can be used, what is important is the **mental representation** that the assessor of the limit’s minimum and maximum, then he adapts his cursor according to the number of grades.

Newtone, upgrading image grading with the PhotoScale



Pairwise comparison
Compare two images and select the one that answers best the question.

The Newtone family of solutions specializes in creating and developing increasingly powerful customized image interpretation **algorithms and acquisition systems**, to help Cosmetic Industry to Innovate, Explore and Develop new products for all ethnic groups around the world. **PhotoScale** solution is a high quality and agile image grading tool that comes completing the computerized image analysis. This **web application** allows online image grading from all over the world in a few clicks, by unlimited number of users. Randomized, blind, pair comparison, simple classification, grading using photographic scales, full face, cropped areas... The innovative Newtone PhotoScale solution offers you a wide range of options for a relevant evaluation of your products based on consumers or expert’s perception.

www.newtone.fr

HOW OBJECTIVATE SLIMMING CLAIMS ?

The cellulite is believed to result when subcutaneous adipose tissue protrudes into the lower reticular dermis, thereby **modifying significantly the dermo-epidermis junction** and **creating irregularities at the surface**. The biomechanical properties of epidermal and dermal tissue may also influence severity. This phenomenon located principally in the thighs, abdomen and buttocks is characterised giving a spongy aspect of the skin. It can be associated with water retention and fibrose.

The clinical studies of the treatment efficacy of slimming products evaluate quantitatively and qualitatively, at the surface or deeply, the body morphology, the skin topography, the state of the dermis and hypodermis, the microcirculation. The **inclusion of the subjects with the hormonal criteria, is a key point** of this type of evaluation to minimise the inter-individual variations.

For the slimming efficacy, the auto-evaluation with an use test questionnaire or a quality of life one, gives a very interesting information of the treatment performance perceived by the consumers. The **multiparametric studies** present a great approach of this claim crossing results from consumer insights, scores by experts and metrology.

What are the present methods and devices available to characterise the changes of weight loss and cellulite decrease ?

Body Morphology

- 1. Clinical visual and tactile scores by skin experts:** see the details in the article about Scores p.2
- 2. Centimetric measurements:** tape measure or laser
- 3. Imaging:**
 - **2D imaging** using cameras, data treatment and a special bench associated
 - **3D imaging:**
 - **Stereo vision system**, camera or video for multidimensional qualitative and quantitative evaluation, associated with data modelling: AEVA 4D (Eotech), BodyScan 3D.
 - Fringe projection and data treatment.

Cellulite aspects

- 1. Clinical visual and tactile scores by skin experts:** skin aspects, rugosity and elasticity
- 2. Surface aspect of the skin:** C-Cube, DermaTOP, Antera 3D, Videometer
- 3. Surface topography analysis** by Silflo print, photo with oblique light, fringe projections
- 4. Hypodermis analysis:** measure of the thickness, shape and density
 - **Ultrasound** (5-10 MHz): Dermcup, DUB®SkinScanner, Dermascan
 - **MRI:** evaluation of the fatty nodules,
 - **Microscopy**, Spectroscopy, Tomography: Confocal, Raman, Reflectance

Complementary criteria

- 1. Elasticity and the firmness of the dermis: A deformation** using ballistometry, suction, indentation or airflow:
 - Dynaskin,
 - SkinFlex,
 - Ballistometer,
 - Cutometer, Cutiscan, Elastimeter, DermaLab.
- 2. Microcirculation:** AB TiVi 700 and Tivi 8000; Laser Doppler.
- 3. Temperature:** EvaTherm, Thermometer, Thermovision.

SLIMMING BY SKINOBS



22 METHODS



30 LABS
IN 20 COUNTRIES



15 DEVICES
MANUFACTURERS

Partners key figures

1

IEC new center in Saint Etienne (France) will open in November.

15

years' experience in the technical assessment and standardized measurements by **DERMATEC**

20

is the factor of the productivity increase offered by the **Smart-pore**

21

blue light and anti-pollution studies in 2018 at **CIDP**

28

body and face zones can be evaluated with the **AEVA-HE/Visio-4D** by **EOTECH**

600

products tested per year in solar studies by **INTERTEK**

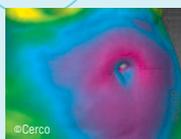
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Silflo print analysed since the beginning of the year by **CERCO**

12 720

subjects included in the studies in the center of Lyon by **EUROFINS DERMSCAN**

Slimming assessment by the Cerco



The slimming effect could be evaluated with different technologies: the centimetric measures stay a reference method, easy to communicate to consumers; but now, we can also **speak about volumes thanks to stereometric measurements**. The firmness and the anti-orange peel effect with evaluation of surface undulation contribute to the slimming effect. **With infra-red thermography and/or laser-doppler**, we can extract information about microcirculation in relationship to congestion of cutaneous tissue. Finally, for a sub-cutaneous point of view, **the ultrasound technology** allows to evaluate the adipocytes invaginations. www.cercotests.com/fr

Eotech Slimming measurement solution



The AEVA-HE/Visio-4D is their key tool to evaluate slimming effects on body parts, combining the state of the art of the **3D scanning technology** and a very **reproducible poisoning device**. Their good experience on measuring body part before and after product treatment to prove product efficacy, promote their solution to be the best to claim **slimming effect for thigh, abdomen, waist and breast, and even for double chin or arm sagging**. Their **unique software** provides pseudo color images of the difference showing positive and negative volume changes as well as **circumferences, volumes, section length and angle calculations** for quantitative evaluation. This solution is available worldwide through their company and their distributor network. eotech.fr

IEC: The multi technical experience of slimming products



For slimming effects studies, IEC can associate different methodologies to evaluate the intensity of cellulite [**Scoring Photographic Scale**], to determine the volume of thighs by centimeter measurement [**Bench with calibrated low-angled light and repositioning lasers**], the parameters of the skin surface roughness [**Dermatop EOTECH**], the firmness of the skin with [**Cutometer**] or without contact [**Dynaskin associated to a 3D quantification**] and for measuring the Hypodermis thickness [**Ultrasonography 7.5MHz**]. www.iecfrance.com

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

News

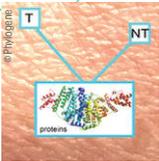
Read the latest news on cosmetics testing. Subscribe to the online Newsletter : www.skinobs.com/news

What augmented reality cannot predict, Eurofins-DermScan evaluates...



Make-up brands are now using augmented reality to offer their customers **virtual makeup experiences via smartphones** to help them choose a foundation shade or test the color of an eye shadow. While these systems are perfect for simulating the immediate visual effect, they cannot predict the long-lasting potential of products. Eurofins-DermScan, thanks to its dedicated panel, has put in place specific descriptors **to score the makeup lasting** but also to evaluate the lasting beautiful effect. These new descriptors allow to evaluate if the result on skin remains as attractive 12h later!
www.eurofins.com/cosmetics/

Phylogene, their in-cosmetics feedback



Of course, the interest on skin microbiota still grows up. The companies want to check if their product have an impact on some **key species with qPCRs** or on **all taxons** with the 16S rDNA comparison. Big companies want to understand how it works at the functional level and prefer to use **metaproteomics and bioinformatics/biostatistics** with the **new HolXplore** module. The substantiation of skin effects on human, based on **untargeted proteomics** and bioinformatics and the **new Coravalid** is now a classic way to discover ingredients new claims. Then they noticed a growing interest with the **Post Translational Modifications of proteins** such as **untargeted phosphorylation**, a key mechanism in functionality and oxidation which Phylogene explores in an **untargeted way** with the **RedOxomics workflow**. <http://ms.phylogene.com> - <http://www.phylogene.com>

Intertek the Solar studies expert!



Intertek Clinical Studies, it's more than **20 years of expertise in photobiology**. Their technical equipment and their dedicated team help you to validate your regulatory markings and claims:

- Standardized **in-vitro or in-vivo** studies: **SPF, PF-UVA** according to ISO or FDA standards,
- **Customized studies**: antioxidant, soothing, self-tanning properties ...
- **Training / sensitization** of your teams to in-vivo solar tests.

Their development and the increase of their capacities allow them to provide you the study results at **the best time**. Their team, always concerned to bring to its customers with quality results, is also a member of **BIPEA** in the context of inter-laboratory tests. www.intertek-france.com/etudes-cliniques

Orion Technolab instrumental innovations



Orion Concept and TechnoLab, expert in innovative cutaneous metrology for clinical studies, proposes this year, **3 new instrumental innovations**:

- The **SkinFLex** for the instrumental and "Clinical" measurement of the Firmness, Tension and the Tonicity of the cutaneous tissues;
- The **HeadScan Dynamics** for calibrated and perfectly reproducible photographs of the face within your laboratory;
- The **HeadScan Selfie**, for the calibrated photography acquisition "At Home" by the panelists themselves and a "daily" follow-up of the effect of the product in its environment.

Orion Concept, **to master the risks of innovation in your clinical studies** and ensure their success. www.orion-concept.com

CIDP innovates with ex-vivo tests combining blue light and pollution protection



CIDP has **developed monochromatic calibrated Blue light sources** and a **Controlled Pollution Exposure System (CPES)** which allows investigation of the **combined effect of blue light and pollution** on skin ageing. Ex-vivo results on **skin explants** have shown that the combined effect of pollution and Blue light induces **an increase in the production of ROS, MMP-1 and IL-6**. Using SEM, results have also shown that the **collagen bundles** present in the dermoepidermal junction unravel and flatten. Moreover, it revealed that skin explants exposed to blue light (412 nm or 450 nm) present a level increase of partially degraded (unwound) collagen as revealed by a specific probe. www.cidp-cro.com

Skinobs Partners of this ZOOM#12



Smart-Pore™: The first biomimetic pore designed for cosmetic testing



Fully transparent, **Smart-Pore™** enables you to visualize in real time the effect of your product on **sweat or sebum** from the pores of the skin.

Already used to screen and measure the efficiency of **antiperspirant** formulations in hours, instead of a month for gravimetry, Smart-Pore™ is also suited to **body care products** and **makeup**.

Combined with Microfactory's **SOD4 technology**, the **sweating or seborrhea** mechanism is reproduced in a **controlled environment** with programmable temperature and humidity.

Microfactory has been recently selected to be finalist of **In-Cosmetics global** and **The Cosmetics Victories**. www.microfactory.eu

Depigmenting efficacy studies by Zurko Research



The efficacy studies, first depend on the **dermatological diagnosis** by using Wood's lamp, called the black light test. The depigmentation treatment is different depending on the type of spot since it varies if it is superficial or deep. For the efficacy studies, they choose **superficial hyperpigmentation**, which response very well to cosmetic treatments. Throughout the study, Zurko Research quantify the melanin **inside the spot and also in an adjacent area of normal coloration**. In this way, they can evaluate the depigmenting efficacy by verifying the decrease in the melanin of the spot and also the tone unification between the spot and the adjacent area. www.zurkoresearch.com

Evaluation, research and care, 3 innovative units at Dermatec



Because innovation goes through multiple **lines of development and reflection**, Dermatec's work is now divided into 3 hubs. Thus Evaluation (aesthetic and therapeutic), Research and patients' Care are distinguishable from one another in order to complete each other. For all its service offering, DERMATEC is committed to seek the most **pertinent tools** in order to highlight the parameters and effects sought while enhancing visual appearance of results. **Dermatec conceived a R&D Unit** focused, first, on a constant monitoring to identify and/or co-develop useful biometrological tools and also on fundamental research programs development. www.dermatec-lyon.com

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