ZOOM #28

skinobs

Édito

Skinobs is glad to bring you some news of testing experts for the Beauty Industry. Skinobs will attend In-Cosmetics Asia in Bangkok, in November 2023, launching the second edition of «**We Are Testing**», a **collaborative booth** to promote the latest methods and testing laboratories in the field of preclinical and clinical evaluation. For this 28th ZOOM edition, we will share with you information about **hair care evaluation** and we are happy to give you the latest news of our partners: **Eotech, Complife, Helioscreen, Pixience, Expertox, CIDP, Newtone, Microfactory, Phenocell, Phylogene, Syntivia, Biofilm Control, Kamax, Ellead, Mérieux, Syres, Validated Claim Support.**

Happy reading ! **Anne Charpentier, CEO**

We thank all our partners for their trust and collaborative work. They enable the evaluation managers around the world to use for free the testing database to substantiate claims. We are really glad to share this success with you.

Did you know that ?

Skinobs platforms are 2 **international databases** renowned as a reference in the testing field of actives and personal care. It represents, with users from 66 nationalities, a unique tool for **preclinical and clinical testing** giving crucial and qualified information. You can find classical or innovative tests that are continually updated with the latest instrumentation and methods, connected to the testing laboratories around the world. To help you to save time in your evaluation projects, you can find at the same place, dozens of information!

1. **Contact directly the testing laboratories and get a direct answer**
2. **Find in each company corporate sheet:**
   - Activity summary and their contact
   - The list of tests and accreditations
   - Their latest articles published in the Newsfeed
3. **Follow your personal search history** selecting in the top right menu. Easily find all your search results and the methods and testing laboratories found for each project.

Let's started for free to access the search.

CONNECT FOR FREE **SKINOBS.COM**

Platforms Users Testimonial'

« I use the Skinobs platform for 3 years when I have new development missions: I really appreciate its completeness and ergonomics, thanks you for all this work and sharing! »

Megan Clarke-Lamb
Trinny London

PRECLINICAL TESTING

892 Methods
49 Skin mechanisms
176 CRO's

CLINICAL TESTING

403 Methods
188 Claims
161 CRO's

FIRST SEMESTER KEY FIGURES 2023

5 300	+3 400	7min	66
Users	**Specific searches**	**Time of connection**	**Users nationalities**

SKINIFICATION OF THE HAIR TESTS FOR HAIR CARE EVALUATION

HAIR ASSESSMENT

Fibre physical aspects and swelling

DSM770, Hair cross-section by dimensional Analysis

Mechanical analysis for suppleness, flexibility, break resistance

MTT690, FBS900, CYC802, FTT950, FDAS770, Stress Relaxation, Fibre Bending, Torsional analysis, Friction, Curl compression, Rumba

Hair surface, structure, thickness, density, diameter

Polarimetric microscopy with K-Probe Xpolar (Kamax), Infra-red microscopy, Confocal microscopy, Scanning electron microscopy, Optical multiphoton tomography, Atomic Force microscopy

Global hairstyling, anti-frizz, volume, curls, bending force, flexible

Fibra-one, Sirtaki, Bolero, Image Analysis, XLW Auto Tensile Tester

Combing

Fibra-one, Sirtaki, Bolero, XLW Auto Tensile Tester

Colour and shine

Pemermeation, Colour, Bleaching Test **Goniolux (Orion), GlossyMeter (C+K), C-Cube (Pixience)**

SCALP ASSESSMENT

Anti-dandruff

Dandruff Meter DA20, Gravimetry, imaging

Hair loss and hair growth

Trichogram, Trichoscale

Anti-pollution

Epifluorescence Microscope (OxiProteomics) Omics Analysis (Phylogene), Fine particles quantification, Heavy metal analysis, Particles adhesion

Moisturizing

Corneometer (C+K), Dermalab Hydration (Cortex), Epsilon (BioX), MoistureMeter

Sebum

Metabolic MS/MS-16srDNA-PCR (Phylogene), QuantiSeb, DermLab Sebum, Sebumeter, Raman microscopy, Shotgun mass spectrometry

Surface

SpectraCam (Newtone), Epsilon (BioX), Dermatop-HE (Eotech), Visia-CR, Visioface and Visioscan (C+K), C-Cube (Pixience), Antera (Miravex), TiVi80 (Wheelsbridge), SIAScope...

Hair is an integral part of one's identity, and people around the world place a great deal of importance on its look and style. Consumers are now looking for more **inclusive**, **natural**, **ethical**, and **sustainable** products that can help them improve their hair grooming rituals while still providing the necessary cleansing and caring benefits.

Biometrological measurements to assess hair care performance

Evaluating the efficacy and safety of hair and scalp grooming products and treatments, as well as improving them for the beauty market, is a key part of R&D. For this, clinical tests, biometrological studies, and in-vivo or hair strand tests are used. However, the challenge for evaluation managers and cosmetic chemists is to find the **right method, a reliable protocol, and a suitable testing partner**.

A multitude of benefits whatever is the type and ethnicity of hair: **Care, Volume, Anti-Frizz, Smoothing, Flat Hair, Repair, Gloss, Shine, Colour, Fine Hair, Curly Hair, straightening effect, Restore, Anti-Sebum, Anti-Dandruff, UV Protection, Anti-Breakage, Moisturising**...

The various biometrological measurements dedicated to fibres, strands and hair testing are focusing different targets: **the scalp, the cuticle, the cortex, the hair structure** and mechanisms or the growth and can be implemented under controlled conditions of temperature, hygrometry, and humidity.

At Testing Laboratories, hair locks are tested in a controlled environment with a **specific temperature and humidity.** Standardised hair tresses are used to accommodate different types of hair, such as **Caucasian, Asian, Brazilian, African**, straight, wavy, or curly. Treatments can be done prior to product application to assess its effectiveness on weakened hair. Additionally, real-life scenarios such as sun exposure, sea exposure, swimming-pool exposure, and sports activities can be simulated to better back up innovative cosmetic claims.

The study of the hair can be classified in 3 main areas:

1. Chemical Properties

- Colour and brighness and permeation
- Hair permeability
- Hair protection

2. Mechanical properties

- Fibre aspects and swelling Analysis
- Mechanical properties analysis
- Combing and abrasion of the hair

3. Hair volume and straightness, and anti-frizz effect

4. Scalp conditions and skinification performance

Are you a R&D manager or Cosmetics chemist looking to study the scalp? If so, you can access the **Clinical testing Platform for free** and find all the instrumentation and tests used to **analyze the scalp**. These tests are adapted to the surface topology and size of the area being studied and can be conducted in-vivo on men or women. The results can be **quantified and visualized** to get the **best results** you want for your products or actives. How do the methods used to study the scalp compare to those used to study the skin?

- Moisturizing effect
- Barrier Function
- Soothing effect
- Seboregulation
- Anti-Dandruff
- Hair loss and hair growth
- Microbiome of the scalp

As consumers become increasingly aware of the need for eco-responsibility, a new trend is emerging in the form of **biodegradability and ecotoxicology tests**. Additionally, tests are being developed to measure the amount of water needed to rinse both solid and liquid products.

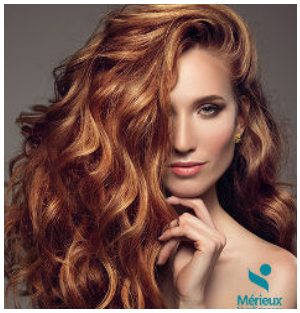
CLINICAL EVALUATION

Scalp soothing by Validated Claim Support

Claim Support Validation is vital for substantiating **hair and scalp care product efficacy**. Rigorous scientific research and testing provide empirical evidence for **claims** like **dandruff reduction, hair strengthening and scalp soothing**. This builds consumer trust, complies with regulations, and empowers informed choices. Brands investing in evidence-backed solutions distinguish themselves as credible and effective, bridging innovation and integrity in a competitive market.

www.validatedcs.com

Hair skinification unveiled by Mérieux



Mérieux NutriSciences unveils its latest experience in the hair care sector. Caring for **coloured** or **damaged hair** is now a routine: the real breakthrough is the awareness and knowledge of **caring for scalp**. Have you ever heard of **Hair Skinification**? This concept of scalp care as hair care comes down to the idea that we should be giving the skin on our heads the same care as the skin on our faces. Thanks to a pool of dedicated project managers, Mérieux NutriSciences is able to offer an **integrated and multi-tool approach** that benefits from all our CosmeticLAB's skills and it can be adopted to evaluate products, ingredients, new formulations and packaging dedicated to scalp and hair care:

1. Scalp & hair care **efficacy testing**
2. **Sensory**, **feeling** and **emotions** evaluations
3. Innovative **packaging suitability**

www.merieuxnutrisciences.com/eu/cosmetics-personal-care

Hair loss in AGA - new study by CompLife

Androgenetic Alopecia (AGA) is a progressive **hairlosstype** affecting up to 80% of men and 50% of women. COMPLIFE performed a new study to test the effectiveness of a client's product on this disease and published it on the "Journal of Cosmetology & Trichology." Their Methods include: **phototrichogram** (Anagen, telogen and hair density were estimated in a target area and automatically calculated by TrichoScan® software), **global photography assessment** , and **self assessment questionnaire.**

Read the complete study on our website and contact us for further infos.

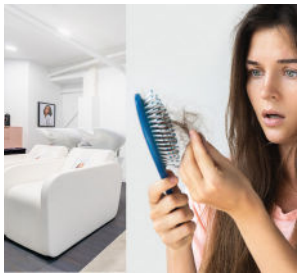
www.complifegroup.com

CIDP bespoke services for hair care

CIDP offers a wide range of ex-vivo and in-vivo tests to substantiate claims for haircare products. With **strategic locations on 4 continents**, CIDP facilitates the recruitment of volunteers of skin phototype II to VI with different types of hair. Their ex-vivo laboratory offers various assays on **natural hair strands of Asian, African, Indian and Caucasian** origins for claims such as fiber resistance, brushing efficacy, shine, color lasting, hair growth or hair fall. **Consumer tests** can be conducted on expert panel of **various ethnicities** which generate marketing data for specific markets like Latin-America, Europe, Africa and India. Their dermatologists are trained on various evaluation scales for **dandruff, hair fall, hair breakage, hair shine and grading scales such as elasticity, resistance, color efficacy, damage, repair and straightening efficacy**. With the recent investment in **phototrichogram and trichoscan**, they provide their clients with the latest tools for hair products evaluation.

www.cidp-cro.com

Hair survey and consumer testing by Syres



Among 9 000 questioned French panelists, 39% declare they have **problems with chronic or regular hair loss** : 40% of women and 26% of men. 38% of these panelists have already followed treatment against hair loss. This problem is even more important for their **panel in Singapore**: 46% of women and 33% of men are affected by chronic or regular hair loss. Thanks to Syres facilities at their **Test Bar in Paris** and the regular **collaboration with hairdressers**, they offer a large range of classical or specific tests on several panels concerned by this problem. By combining various evaluation methods such as **self-assessment, expert evaluation and standardized photos** before and after treatments, they are able to highlight the effectiveness of their clients' hair care products, whether is routine or food supplements treatment.

www.syres.fr

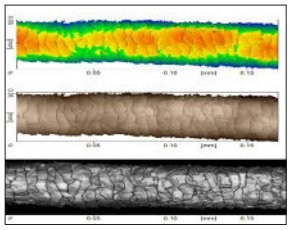
MEASUREMENT DEVICES AND METHODS

T-Skin™ , latest skin barrier evaluation innovation by Microfactory

Microfactory, an innovative company in the field of in-vitro cosmetic testing, today unveils its latest evaluation innovation: T-Skin™, the first in-vitro test capable of assessing, **in just one hour, the protective performance of your skin barrier products**. This technological breakthrough uses **microfluidics** to combine a synthetic polymer skin that faithfully reproduces the **evaporation of water** from human skin with a sensor for measuring TEWL (Transepidermal Water Loss). T-Skin™ delivers reliable, precise results, and enables product claims to be validated much faster than tests on volunteers. Come and see them during **Cosmetic360** trade show **Booth FB54.**

www.microfactory.eu

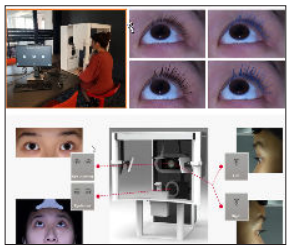
MiniSURF microscope for hair surface quantification by Eotech



On the way to meet hair care researcher's expectations, they recently got new results with their MiniSURF **interferometric microscope**. Not only does this unique device allow to obtain **images of the hair surface**, and also provides an **accurate quantification of the relief state** thanks to it's confocal mode. This is a reliable way to evaluate **smoothing, sheathing** or even **restorative** effects of hair care actives. It measures the change of **roughness parameters** Rz and Ra as well as the parameter Lr which reflects the surface complexity. Furthermore, the measurement does not require any specific preparation of the sample, which makes it a good alternative to MEB technology at an affordable cost...

www.eotech.com

EyelastCam, a new imaging system to evaluate the eye area by Newtone



Quantify a **separating or lengthening effect**, support the **curving effect** of your mascara, find out if your star product enhances the eyes of your consumers! With EyelashCam, Newtone offers the possibility to **visualize, understand and evaluate** precisely the effects of treatments and makeup applied on eyelashes or on the eye area. Just like other Newtone systems, EyelashCam is connected to the cloud, enabling you to review images in real time, wherever they have been acquired. Thanks to **high resolution images** taken from the front in a mirror-like mode, in low-angle configuration, or from 90° profile, you will get quantitative analyses of eyelashes length, volume and curvature, as well as eye opening.

www.newtone.fr

Hair care assessment with C-Cube by Pixience

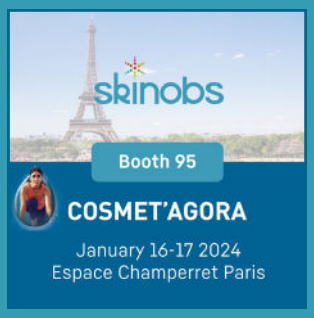
C-Cube 3 and its software for clinical research assists you for your haircare evaluation. With its CIE L*a*b* **Colour measurements, you can estimate: hair color, dye resistance, dye evenness**. Analyze also scalp's state of health through **inflammation, dandruffs or desquamation measurements**. Thanks to the new premium access, you can use the C-Cube 3 for phototrichogram protocols and obtain **hair density and average growth** measurements. C-Cube CR is the most versatile instrument designed to help you with cosmetic product efficacy analysis. It offers relevant use-cases for haircare product evaluation, in addition to its dozens of other applications for clinical evaluation of the skin.

www.pixience.com

Information referenced in the Skinobs database

	On strands	In-vivo on hair	In-vivo on scalp
Devices	38	20	60
Devices manufacturers	11	9	33
Testing labs	72	60	73

Meet Skinobs



HAIR CARE PRECLINICAL ASSESSMENT

The emergence of «skinification» in 2020 highlighted a growing consumer understanding of the need to care for the scalp akin to how one cares for the skin. This approach involves using exfoliating, hydrating, and anti-aging actives to promote healthy hair growth and reduce hair damage. The scalp, where the hair follicle's base is deeply embedded in the skin, plays a crucial role in determining hair quality, making it a focus area for the beauty field. Cosmetic brands face the challenge of addressing two key dimensions: **hair treatment and scalp care**.
To effectively tackle this challenge, in-vitro and ex-vivo techniques are practical tools to explore potential claims and meet emerging needs. Traditional protocols often emphasize hair growth stimulation or inhibition, but the rise of skinification and increased consumer concern about damage prevention and anti-aging have spurred innovation in in-vitro evaluation.

Efficacy screening can occur through 3 primary supports:
1. **In-vitro 2D models**: Utilizing human follicles like HFDPC (Human Follicle Dermal Papilla Cells) and hair follicle keratinocytes, along with other cell lines like HaCaT and sebocytes for specific studies.
2. **In-vitro 3D hair follicle organoids**: 3D dermal papilla spheroids mimic hair regrowth and represent advancements in hair research.
3. **Ex-vivo follicle dissection or scalp biopsies**: samples from healthy or diseased patients maintained in culture.

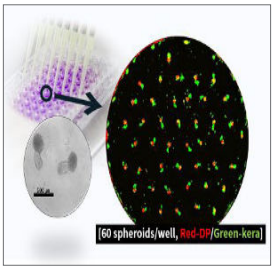
Those approaches have become integral to routine hair care evaluations offering reliable opportunities for proof of concept of performance. They enable quantification and imaging of various activities related to hair metabolism. Choosing appropriate models and biomarkers and engaging in discussions with CROs, are crucial steps to establish robust evaluation protocols.

Kamax revolutionizes capillary evaluation with XFluo® 3D

XFluo® 3D offers both quantitative and qualitative analyses of **hair surface roughness** (Rq). Associated claims to Rq measurement refer to **hair repair and strengthening effect** for a better smoothness and shine. HD visuals provide opportunities to: **make videos of hair** to compare before / after hair care and **custom images** according to desired hair color. Diverse stresses such as **pollution, UV, discoloration, thermal wear, or brushing** are possible for **preventive and curative protocols** implementation on straight, curly or textured hair. **XFluo® 3D** combines advantages of **interferometry and MEB** and is a breath of fresh air on capillary evaluation methods.

www.kamax-innovative.com

New hair growth screening based on hair follicle organoids by Ellead



This newly introduced screening system can be regarded as an effective and reliable in-vitro method for **screening a tremendous number of hair growth candidates** in a short period of time. In this method, **primary dermal papilla cells and neonatal keratinocytes** are co-cultured on a micro-patterned 3D spheroid 96-well culture plate with capacity of 60 spheroids/well resulting in the formation of numerous **uniform-sized 3D compact spheroids**. The efficacy of the test drugs on keratinocyte pillars growth is assessed using **fluorescence immunostaining techniques**, and analysis the image data by a high-content screening (HCS) instrument. This approach is verified by testing the hair-stimulating drugs such as Minoxidil which has showed significant **elongation of the keratinocyte pillars**, making it a promising alternative to animal tests.

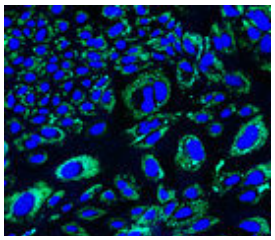
www.ellead.com

New model to screen ingredients on hair growth by Syntivia

Sometimes you don't need to look at the hair follicle, but at what's going on around it. Syntivia has set up a **transcriptomics chip** to quantify the expression of major genes involved in **various aspects of hair growth**:
growth factors, catagen phase induction, hair follicle differentiation, hormone regulation, matrix environment, stem-cell maintenance... They work with the two cell types most involved in the induction and maintenance of hair growth:
- Human Follicle Dermal Papilla Cells (HFDPC) isolated from human dermis of the scalp
- Human Hair Follicle Stem Cell (HFSC) isolated from Hair Follicle bulge.

www.syntivia.fr

iPSC-derived sebocytes to study their role in alopecia, by Phenocell



Alopecia and hair thinning have been linked to excessive lipid contents on the scalp. The sebaceous gland contributes to sebum production, which physiologically helps to seal in moisture and prevent desiccation of the skin. **Excessive sebum production in androgenic alopecia** is linked to a marked increase in the size of the associated sebaceous gland, suggesting that overgrowth of the gland and effects of the follicular stem cells are **important factors in hair loss**. With their range of in vitro assays based on iPSC-derived sebocytes, they can investigate the efficacy of ingredients and molecules on sebum production, including after androgen-receptor stimulation.

www.phenocell.com

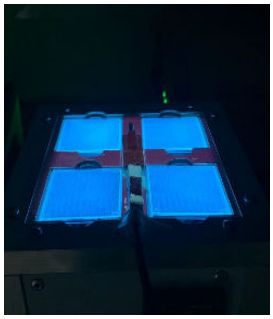
OTHER NEWS FROM TESTING LABS

Environmental impact of solid cosmetics for clean beauty by Expertox

Do you know the environmental impact of your solid cosmetics? These eco-responsible products are not without an impact on the planet. Their wash-off nature requires a careful evaluation of their formula from an **environmental toxicity** perspective. Their toxicological expertise delves into this crucial aspect to ensure that your skincare routine remains both **respectful of nature and your well-being**. Their laboratory also assists you in formulating these products. Trust in their scientific approach for **sustainable beauty**, preserving the health of your skin and our environment.

www.expertoxcabinet.fr

New test for long UVA rays protection by Helioscreen



UVA radiations have a wavelength between 320nm and 400nm, while long UVA is between 340nm and 400nm. Those represent **75% of UVA rays and 80% of the total solar radiations**. They can pass through clouds or windows and can **penetrate the deep layers of the skin to the dermis**. Mainly responsible for immediate tanning, they however promote **photo-induced skin aging** and skin cancers. HelioScreen will soon offer a **new test** to evaluate this Long UVA rays protection (UVA I), based on the ISO 24443:2021 standard for the in vitro evaluation of the UVA-PF. The product is exposed to UV before spectrophotometric measurement to factor any photo-instability. The protection against Long UVA rays of a sunscreen product will be calculated over a shorter wavelength range yet crucial to be more protective for the consumer. HelioScreen offers **3 validation criteria** : UVAPF-I, UVA I/UV ratio, and wavelength used so that the product can be claimed "**Long UVA rays protection**".

www.helioscreen.fr

Functional multiomics for innovative skin microbiome analysis by Phylogene

Phylogene is familiar in using the complementarity between **metagenomics and metaproteomics** to obtain more focused claims. Now based on its expertise in metaproteomics, Phylogene is completing its proposed services as close as possible to **real functionality with metabolomics** dedicated to **skin metabolism**. Our metaproteomics and metabolomics toolset - the two omics closest to the phenotype - and our bioinformatics tools enable integrated and standardized metaproteomic and metabolomic analysis of data. Enrichment of metabolic pathways and correlation analysis of regulatory mechanisms of **upstream protein actors of metabolism** and **downstream metabolite** changes provide a comprehensive view of the effects generated at the skin and **microbiome level**.

www.ms.phylogene.com

Top 10 Claims 2023

Preclinical Assays

1. Hydration
2. Anti-ageing
3. Nourishing
4. Anti-UVB
5. Anti-Maskné

Clinical Studies

1. Hydration
2. Anti-ageing
3. Nourishing
4. Anti-UVB
5. Anti-Maskné

Microbiota friendly certification by BioFilm Control

In an era where consumers are increasingly focused on ingredient transparency and the impact of products on their health, the beauty industry is embracing a new frontier: the skin microbiota. At BioFilm Control, they lead this charge by offering a **groundbreaking Microbiota-Friendly certification** and leveraging their extensive expertise in the realm of skin microbiology. Taking care of skin microorganisms is pivotal to maintain **skin's health and its barrier function**. Their certification assures that products **promote balance and diversity of the skin microbiota**. They rigorously test on a **diverse range of bacterial strains**, emulating real-world conditions to scientifically validate **microbiota-friendliness**. They specialize in analyzing microbiota **since 2005** in its various forms, including biofilms. Their team of experts is dedicated to helping brands optimize their formulations, ensuring **microbiome harmony.**

www.biofilmcontrol.com/activite

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