

Cosmetic Products and Sensitive Skin

What is sensitive skin?

Sensitive skin is defined as the occurrence of sensations of discomfort at different sites on the body (tingling, burning, pain, pruritus, pins and needles) in response to stimuli that would not normally cause such sensations.

The skin may thus appear normal, or on the contrary, present erythema.

Regulatory approach

Regulation (EU) n°655/2013

The regulation establishes the six common criteria that cosmetic claims must meet in order to be used: compliance with legislation, veracity, evidence, sincerity, fairness, and informed choice.

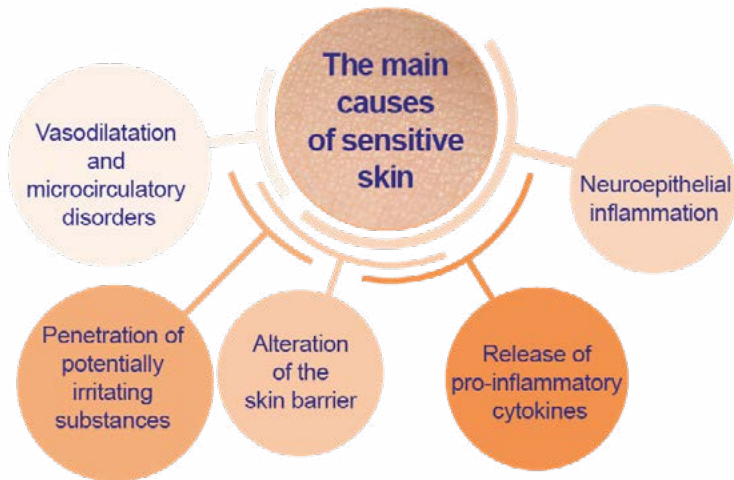
The «sensitive skin» claim

The «sensitive skin» claim: The «sensitive skin» claim can be made if the following two conditions are met:

- The volunteers included in the use test, carried out under normal conditions of use, declared a recent and repeated history of functional symptomatology of cutaneous discomfort (e.g.: tingling, pulling, heating, itching, burning sensations, redness, etc.)
- These volunteers did not show an increase in the functional symptomatology of skin discomfort analysed as relevant during the use test.



The dermatological point of view



What to do? *

Although no study to date allows us to conclude what to do, we can advise certain measures:

- Reinforce the skin barrier
- Avoid exposure to triggers
- Soothe
- Adopt a holistic approach

In practice, what is the dermatologist's advice?

- Do not underestimate sensitive skin
- Know how to identify underlying dermatosis
- Advise use of the appropriate cosmetics
- Be aware of intolerant and allergic skin
- Dermatological and allergological check-up if necessary

* : Forum for the Study of Itch (IFSI) Expert Panel on JAAD 2020



An appropriate formula

Formulating products for sensitive skin can be complex, requiring a refined formula and a meticulous choice of ingredients.

As this is often very reactive skin that we are talking about, it is essential to avoid as much as possible any ingredient that could potentially cause discomfort, and to favour ingredients with a well-established toxicological profile and good tolerance.

Preferred ingredients:

- Mild emulsifiers > Avoid cationic and anionic
- Emollient > Reconstitution of the hydrolipidic film
- Fats > Reconstitution of the hydrolipidic film
- Moisturizing actives > Humectant, filmogenic, etc.
- Soothing, anti-redness active ingredients > Limiting sensations of discomfort
- Respect of the pH of the skin > Between 5.4 and 5.9 (face and body)
- Protection from UV rays > Protection against external aggressions

Ingredients to avoid:

- Perfume (avoid if possible) not classified as a skin irritant H315, not classified as a sensitizer H317, no allergens
- Potentially irritating and/or sensitising substances
- Some types of products are not suitable for sensitive skin: scrubs, peels, depilatory waxes, slimming products, etc.



An essential analytical plan

Analytical studies are a necessary step to ensure the product does not contain substances that can cause discomfort.

It is therefore essential to define an analytical plan with an expert toxicologist on the dosages of these substances. These can include:

- Allergens
- Preservatives
- Residual impurities
- Heavy metals
- Preservatives



An *ex vivo* reinnervated skin model

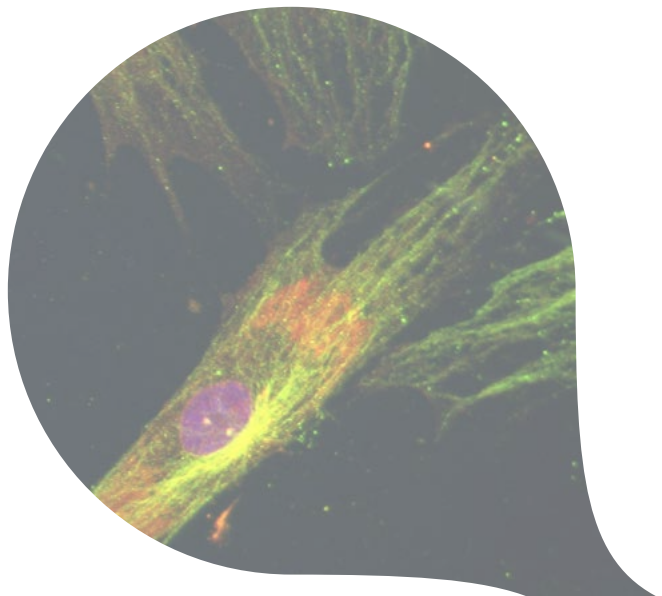
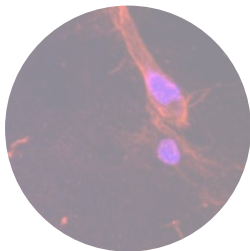
Pruritus is an unpleasant sensation that produces the need to scratch. It leads to inflammatory skin pathologies that are quite debilitating, associated with a deregulation of neuro-cutaneous interactions named sensitive skin.

In partnership with one of the world leaders in the study of the relationship between the skin and the nervous system, the laboratory of the University of Western Brittany, Eurofins BIO-EC is developing an *ex vivo* model of reinnervated human skin.

This *ex vivo* reinnervated skin model, mimicking sensitive skin, allows the efficacy of soothing cosmetic products intended for this type of skin to be evaluated.

It integrates neurons of human origin, using the technology of re-innervation by human sensory neurons from differentiated stem cells.

In this context, the NERVESKIN project aims to enable customers to develop new ranges of soothing cosmetic products for sensitive skin, based on natural plant extracts.



The recruitment of subjects with sensitive skin is based on questioning as to the types of discomfort experiences and the way they occur and their frequency, taking care to eliminate any links with a pathology. As of now, there is no other (simple) method that can be used to diagnose a subject with sensitive skin.

Safety tests

- ROAT on subjects with sensitive skin
- Use test: From the point of view of the ARPP (professional advertising regulation authority), only if the use test is carried out under normal conditions of use on a representative number of subjects selected as having sensitive skin and for a sufficiently long period of time is it possible to monitor the evolution of sensations of discomfort and to justify a «sensitive skin» claim.

Sensory analysis

- Objective, qualitative and quantitative data on the product in order to select the texture and galenic to meet the expectations of people with sensitive skin and participate in reducing discomfort.
- Galvanic skin response

Efficacy tests

- Challenge tests: For the selection of subjects based on similar criteria and monitoring of their reactivity. Sensitivity to lactic acid (stinging test), sensitivity to capsaicin, reactivity to LSS/ NM /DMSO, repeated washings/ exaggerated immersions in the presence of surfactants, etc.
- Questionnaires: Clinical evaluation, quality of life and emotions, subjective evaluation
- Biometrological measurements: Evaluation of the skin barrier function, measurement of skin hydration, soothing effects, etc.



That's why, in a strict regulatory setting, Eurofins is your key partner to perform toxicological, analytical, ex vivo or in vivo tests, allowing you to market products with «sensitive skin», «hypoallergenic», «baby products», and «high tolerance» claims, etc.



Cosmetics@cpt.eurofinseu.com



eurofins.com/cos



[@ Eurofins Cosmetics & Personal Care](https://www.linkedin.com/company/eurofins-cosmetics)



 **eurofins**

Cosmetics &
Personal Care