

Olive squalane for efficiency, comfort, and sustainability

By Sophim *

Introduction

2020 was a particular year that troubled the way we live. In the cosmetic industry, those upheavals translated into new uses and rituals, as populations around the world were adapting to sudden lockdowns.

In the beginning of 2021, consumers' demand for efficient, comforting and sustainable formulas has been rising. The cosmetic industry has a role to play in offering efficient products, that are also sensorial and composed by renewable or sustainable ingredients.

One ingredient answers this need for balance between efficiency, comfort, sustainability and clean beauty: olive squalane. (www.sophim.com/en/squalane/)

Moisturizing is key

Moisturizing is still a key benefit for skin care consumers. As read on Mintel, the part of new beauty and personal care products claiming to offer moisturizing or hydration kept rising in the last few years. During the pandemic, ingredients such as emollients were relatively successful, as they address skin issues to their roots by deeply hydrating the epidermis. Among them, squalane is particularly effective.

Squalane (C₃₀H₆₂) is derived from squalene. Squalene (C₃₀H₅₀) is produced by the human body, and is present in the stratum corneum of our epidermis. Thanks to its lipid form, it is likely to penetrate quickly into the skin and has a restorative action on the lipid barrier of our epidermis. It is a great emollient with high moisturizing properties. However, squalene is subject to oxidation. Present in the unsaponifiable fraction of olive oil,

squalene can be hydrogenated into squalane, an active emollient more stable thanks to its saturated carbon chain. Phytosqualan, Sophim's 100% olive squalane emollient (www.sophim.com/en/product/phytosqualan/), was tested in formulation (5%) on 10 female volunteers from 35 to 65 y.o and was found to increase skin elasticity by 3.6%, skin firmness by 4.5% and skin moisturizing by 11.6% after 28 days application.



* Cécile Pinatel, Sophim's Marketing Manager

Well-being is a shared concern

In an anxiety-provoking context, many people developed creative ways to relax and comfort themselves. Meditation, cooking lessons online, new creative hobby, yoga and so on helped all of us to find our inner peace. This new concern goes beyond nationalities or cultural differences: it has become a universal concern shared by all.

And among many other industries, the cosmetics have an important role to play. As a natural ingredients cosmetic supplier, we were able to ascertain the shift in the value final consumers were giving to their «me-time» cosmetic moments. The answer from the cosmetic industry was to provide them with more comforting and sensorial formulas, to support them on their path to relaxation and well-being.

Olive squalane is a key ingredient in responding to these new requests. Thanks to its biomimetic properties, it offers a quick penetration and brings exceptional sensory properties that are of interest for a comforting formula: it indeed perfectly balances a rich, efficient hydration with a light, non greasy touch.



Sustainability: Upcycling, Green Chemistry and Biodegradability

The consumers are in demand for naturality. This trend is not new, however it is highly accelerating following the different lockdowns and the reduction of human activity in the world.

Naturality is not only about natural ingredients, it has become a real concern about sustainable sourcing, green processes, bio-

degradability of cosmetic ingredients. To help providing greener formulas, Sophim chose a circular economy approach to produce our 100% olive squalane ingredient: Phytosqualan:

- **Raw material:** squalene is extracted from by-products of the olive oil industry. Sophim valorises these by-products into a qualitative COSMOS approved cosmetic ingredient.

- **Process:** follows green chemistry principles. Sophim was awarded in 2011 with the Pierre Potier prize, acknowledging the green chemistry principles are applied to its processes (solvent-free chemistry), and is EcoVadis certified (gold since 2019) for its environmental and impact management.

- **End of life:** Phytosqualan is a product of the circular economy thanks to upcycled raw material, is produced in respect of the environment, and its end of life is also sustainable as Phytosqualan is biodegradable.

Now is the time to rethink and adapt the way to answer to more and more educated and conscious customers. Olive Squalane is the ingredient that allows formulators, with Sophim's support, to guarantee a clean and green sourcing to consumers, while offering efficient moisturizing and comfort through their formula.

Details about SQUALANE (C₃₀H₆₂):

obtained from the hydrogenation of SQUALENE (C₃₀H₅₀)

The upper layer of the skin is composed of a complex of lipophilic and hydrophilic substances acting as protectors against micro-organisms and TEWL (Trans Epidermal Water Loss).

Squalene is a molecule naturally present in it, in the stratum Corneum (superficial skin layer). It helps to maintain the skin suppleness and elasticity of the skin.

Its hydrogenated derived, Squalane, C₃₀H₆₂, is more stable in cosmetic formulations thanks to its saturated carbon chain.

It has a very strong biocompatibility & easy penetration: it is a good active carrier.

The strengths of Phytosqualan, 100% olive squalane:

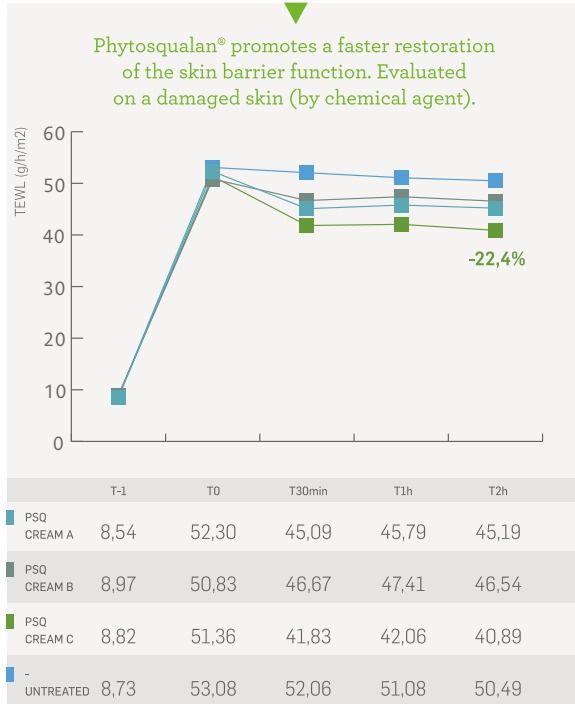
- Natural origin, olive sourced: a cosmetic ingredient that has active properties
- Sourcing: upcycling from the food industry.
- European sourcing



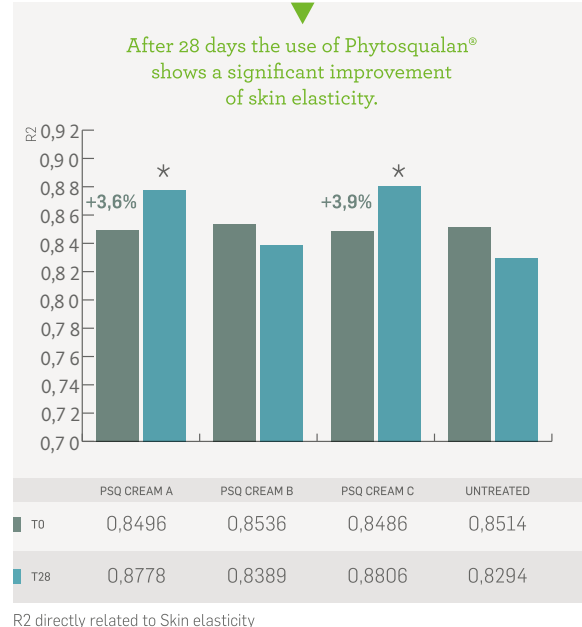


Properties

Regenerating and soothing effect of **Phytosqualan®**, on top of its efficiency in improving moisturizing and skin elasticity have been evaluated (full study available on request). ■

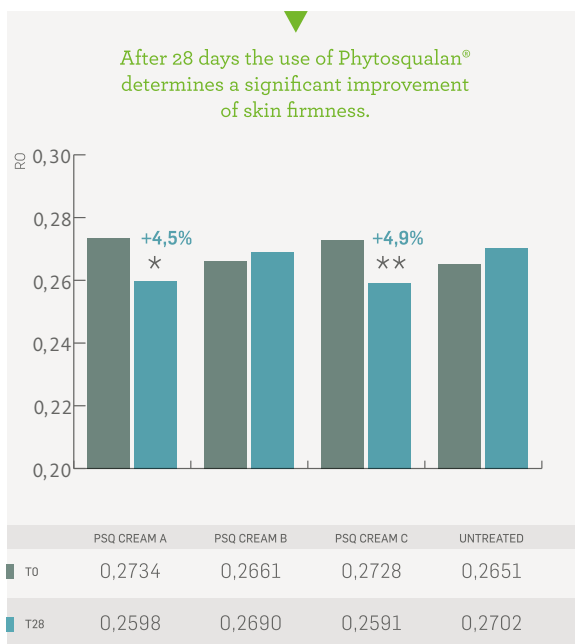


Cream A : 5% Phytosqualan® - Cream B : Placebo
Cream C : 10% Phytosqualan®



R2 directly related to Skin elasticity

EXPERIMENTAL TIMES	
T-1	Evaluation before the application of the patches with SLS on volunteers' back
T0	Evaluation 15 min after patches removal
T30min	Evaluation 30 min after the product application
T1h	Evaluation 1 hour after the product application
T2h	Evaluation 2 hour after the product application



R0 value inversely proportional to skin compactness ;
reduction of this parameter indicates improvement of skin firmness

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