

# Supernatural Face Oil



Retinol is a common and popular ingredient in the cosmetic industry, largely owing to both its accessibility and efficacy. However, there are common associations with undesirable effects amongst users, such as irritation and flaking skin. Further, topical retinol use is often contraindicated for individuals who are pregnant or breastfeeding. Emma Lewisham's Supernatural Face Oil has been designed to interact with the skin in a novel manner to target enhanced cellular activity desired by retinol users through recent advances in non-retinol ingredients. The resulting formulation demonstrates an ability to stimulate amplified results while upholding safety and tolerability for the general population.

# Formulation Design & Delivery

## Physiology Synchrony Unlock Method™

This formulation has been engineered in line with the Emma Lewisham P/S Unlock Method™ of product design. This method is anchored on the skin's physiology, piecing together novel combinations of up to 25 scientifically researched ingredients to work in symphony and trigger a coordinated response from the skin. This synchronous activity is designed to deliver formulations that both enhance the skin's condition and amplify its response to achieve leading results.

## Why did we develop this product?

Emma Lewisham's Supernatural Face Oil was designed to provide a solution to the efficacy versus tolerability compromise commonly observed with retinol products. While retinol is generally accepted to possess an ability to reduce fine lines and wrinkles, coupled with other desirable impacts, it is also commonly associated with irritation and 'retinol rash' and is not generally recommended for those who are pregnant or breastfeeding. Emma Lewisham has sought to provide a solution that delivers the target results while, not only

avoiding the detrimental effects, but actually improving the skin's condition.

## How does this product achieve retinol-like results without retinol?

We designed this formulation from a 'skin first' position, focusing on the skin's own cellular processes and working with its physiology in a novel way. While this is a deviation from the more common conversation that debates which form and concentration of retinol is optimal, it allows focus on the desired cellular activity and identification of opportunities to, not simply trigger this activity, but to enhance the skin's bioactive potential before activating it to achieve amplified results.

The core system of Supernatural Face Oil is constructed to greatly enhance the production of structural proteins, namely collagen, to enhance the skin's underlying matrix and increase firmness while reducing fine lines and wrinkles. The wider formulation addresses the skin's condition, supporting its natural resilience and improving its condition. The development path to achieving this dual outcome was a lengthy process and performed in two phases.

# Achieving increased collagen synthesis and wrinkle reduction without the associated cost to the skin

## Phase 1: Formulation Design

Phase 1 of formulation design aimed to achieve and validate that, through harnessing nature and the P/S Unlock method, Supernatural Face Oil could stimulate collagen production and reduce fine lines and wrinkles while nurturing the condition of the skin.

An increase in collagen synthesis, for this phase, was targeted through Bakuchiol – widely considered nature’s retinol alternative. This ingredient has widely demonstrated an ability to interact with skin cells to upregulate the expression of markedly similar downstream genes compared with those resulting from retinol<sup>1</sup>. Further, this powerful extract has also demonstrated an ability to stimulate increased production of Type I Collagen

in human skin cell Fibroblasts<sup>2</sup>.

The wider formulation was designed to target the health and condition of the skin through upregulation of antioxidant activity and fortification of the skin’s barrier.

Antioxidant and barrier activity was carefully considered, as reactive oxygen species and inflammation are associated with negative impacts on the skin, along with activity that can lead to collagen degradation. Schisandra chinensis extract, along with Leontopodium alpinum extract sourced from high altitude due to its higher leontopodic acid concentration, have been included to target high levels of antioxidant activity and to reinforce the skin’s protective barrier.

## Phase 1: Formulation Validation

Impact Investigated	Methodology Summary	Results
Upregulation of collagen production	Independent <i>in vitro</i> study (2020) investigating the impact of Supernatural Face Oil on the collagen production of Human skin fibroblast cells during a 24 hour incubation period.	<ul style="list-style-type: none"> <li>– Confirmation of increase in collagen production.</li> <li>– Comparative impact on collagen production between Supernatural Face Oil and two leading in-market products demonstrated the greatest upregulation was triggered by Supernatural Face Oil.</li> </ul>
Impact on wrinkle parameters on human skin	Independent <i>in vivo</i> study (2022) investigating the impact of Supernatural Face Oil on the wrinkle parameters of human facial skin over a 2 month usage period. Assessed via polymer skin prints, which were analysed using skin imaging.	<ul style="list-style-type: none"> <li>– Confirmation of reduction of wrinkle depth and number of wrinkles.</li> </ul>

# Enhancing efficacy and investigating comparative performance alongside retinol

## Phase 2: Formulation Enhancement

While Phase 1 achieved the objectives of efficacy without compromise, a Phase 2 formulation enhancement was initiated to incorporate new technology and focus specifically on comparative performance alongside retinol.

Advances in ingredient technology had identified specific extracts from chloroplasts, the energy powerhouse of plant cells, that could deliver a widened array of cellular interactions targeted towards an increase in collagen density. Specific lipids and terpenes extracted

from *Medicago sativa* had shown through *in vitro* research, an ability to upregulate the expression of and activate specific Vitamin A receptors. This new ingredient was incorporated to target a key piece of the overall collagen puzzle for an amplified response from the skin and therefore an enhanced level of efficacy – a ‘springload and activate’ system. Targeted Collagen-Enhancing Interactions – a ‘Springload and Activate’ System.

## Phase 2: Formulation Validation

In order to validate the target formulation enhancements at a mechanistic level, independent *in vitro* testing was performed on the enhanced formulation, confirming the desired impact of the formulation.

Impact Investigated	Methodology Summary	Results
Impact on fibroblast population	Independent <i>in vitro</i> study (2023) investigating the impact of Supernatural Face Oil on the population of Human skin fibroblast cells during a 24 hour incubation period. Comparative to 1% retinol.	<ul style="list-style-type: none"> <li>– 126% increase in fibroblast population.</li> <li>– Comparative impact on fibroblast population between Supernatural Face Oil and 1% retinol demonstrated greatest increase in fibroblast population was triggered by Supernatural Face Oil.</li> </ul>
Impact on enzymatic degradation of collagen	Independent <i>in vitro</i> study (2023) investigating the impact of Supernatural Face Oil on matrix metalloproteinase (MMP) activity in Human skin fibroblast cells during a 24 hour incubation period. Comparative to 1% retinol.	<ul style="list-style-type: none"> <li>– 39.8% decrease in MMP activity.</li> <li>– Comparative impact on MMP activity between Supernatural Face Oil and 1% retinol demonstrated greatest inhibition of MMP activity was triggered by Supernatural Face Oil.</li> </ul>

# Supernatural Face Oil Summary

Advances in both skin research and ingredient technology have highlighted an opportunity to achieve new levels of efficacy without the associated negative impacts of commonly sought treatments. The Emma Lewisham Supernatural Face Oil has been developed over a number of years and has demonstrated, through independent testing, the ability to deliver mechanistic targets over and above 1% retinol, along with clinical improvements. This unique formulation, designed to deliver a springloaded response from the skin, presents the customer with an optimal solution that overcomes the negative impacts on skin while delivering enhanced results.

## References

- 1 Chaudhuri RK, Bojanowski K. Bakuchiol: a retinol-like functional compound revealed by gene expression profiling and clinically proven to have anti-aging effects. *Int J Cosmet Sci.* 2014 Jun;36(3):221-30. doi:10.1111/ics.12117. Epub 2014 Mar 6. PMID: 24471735.
- 2 Bluemke et al. Multidirectional activity of bakuchiol against cellular mechanisms of facial ageing - Experimental evidence for a holistic treatment approach. *Int J Cosmet Sci.* 2022 Jun;44(3):377-393. doi:10.1111/ics.12784. Epub 2022 Jun 9. PMID: 35514037; PMCID: PMC9328396.

All Emma Lewisham products are formulated according to Regulation (EC) N° 1223/2009 which is the main European regulatory framework to strengthen the safety of finished cosmetic products. Emma Lewisham products have been independently reviewed by an expert safety assessor according to these regulations and issued a safety certificate. As part of this review, they have confirmed there are no groups of people, such as pregnant or breastfeeding women, for which Emma Lewisham products would be unsafe.

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