

Supernatural Face Crème Riche



In the pursuit of healthy and radiant skin, there are undoubtable benefits in addressing multiple aspects of skin health and condition in a comprehensive approach. Recognising the diverse nature of individual skin concerns, Emma Lewisham developed the Supernatural Face Crème Riche. It is an advanced moisturising crème that targets three key pillars of activity to enhance the skin's vitality at a cellular level. Through its targeted enhancements in hydration, structural support, and resilience, it strives to improve the overall condition of the skin. This crème delivers enhanced hydration, measurably improved elasticity, and a reduction in the appearance of fine lines and wrinkles. Further, by fortifying the skin's barrier function, Supernatural Face Crème Riche aims to enhance the skin's regulatory ability, promoting overall skin health.

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?

Supernatural Face Crème Riche was developed with the aim of addressing the unique challenges faced by the skin, which acts as a crucial interface between our internal and external environments. Recognising the limitations of existing skincare options that often offer one-dimensional solutions, Emma Lewisham was motivated to create a formulation that takes a comprehensive and multi-dimensional approach to supporting the skin. Understanding that the condition and appearance of the skin significantly impacts individuals' self-esteem¹, Emma Lewisham was determined to create a product that went beyond conventional solutions. The Supernatural Face Crème Riche's multi-dimensional approach focuses on three key pillars of skin health that are crucial for achieving optimal skin condition and appearance - hydration and moisture retention, structural support, and resilience and condition. By addressing these pillars, this formulation aims to deliver measurable improvements in both the overall health, condition and visible appearance of the skin.

Formulation Blueprint

Aging is a complex process influenced by various intrinsic and extrinsic factors including genetics, hormonal changes, environmental exposure, and lifestyle choices. Comprehending the underlying scientific processes of aging skin enables the development of targeted interventions.

As we age, the skin undergoes a multitude of complex changes. In the dermis, a decline in collagen biosynthesis is typically coupled with an increase in the activity of collagen-degrading enzymes. This 'flips the switch' between synthesis and degradation, resulting in a decrease in collagen - reducing the 'structural support' of the extracellular matrix^{2,3}. In addition, the skin's ability to retain moisture diminishes due to decreased production of natural moisturising factors and impaired barrier function. This contributes to dry, less plumped skin.

In addition to these natural aging factors, extrinsic environmental factors also introduce a plethora of challenges for the skin⁴. Things such as seasonal variations, travel-related challenges, and exposure to varied climates can exert additional stress on the skin. In colder seasons, low humidity levels which are often combined with dry heating, exacerbate skin dehydration. Lifestyle choices can also significantly impact the skin's aging process. Lifestyle factors such as smoking, excessive alcohol consumption, and poor nutrition can generate oxidative stress and inflammation. Chronic stress - which has become prevalent in modern lifestyles - disrupts the body's stress response system. This in turn, can affect the skin's beneficial protective and regenerative activity⁵. Inadequate sleep patterns and chronic sleep deprivation can be associated with impairment of the natural regenerative processes of the skin, leading to diminished collagen synthesis and compromised barrier function⁶. The combination of these factors can result in the formation of wrinkles, sagging, loss of firmness, and a decline in overall skin health and condition.

Achieving a measurable increase in collagen synthesis

Phase 1: Formulation Design

The objective of phase 1 was to work out how to achieve a formulation that essentially turned back time - delivering a crème that increases collagen inventories, firms the skin, reduces fine lines and wrinkles, deeply hydrates, physically plumps, and has a luxurious skin feel.

Three key pillars of activity were identified as target enhancements for the Supernatural Face Crème Riche; hydration and moisture retention, structural support, and resilience and condition.

Hydration and moisture retention are targeted through our signature 72-hour moisture lock technology which harnesses Hyaluronic Acid to increase skin hydration, as well as Saccharide Isomerate to stimulate the upregulation of hyaluronic acid production, then combined with a rich blend of phytolipids to reinforce the skin's moisture barrier, in turn decreasing transepidermal water loss. Through this moisture system, persistent hydration and boosted barrier function is targeted. This supports the skin's overall condition, while impacting measurable changes in skin elasticity and wrinkle reduction.

Structural support is targeted through an increase in

synthesis of structural proteins, such as collagen, combined with a decrease in collagen degradation. Collagen, a fundamental structural protein, plays a pivotal role in maintaining the skin's firmness and lift. Supernatural Face Crème Riche incorporates ingredients specifically chosen to stimulate collagen production to promote the restoration of the extracellular matrix. By targeting fibroblasts, the cells responsible for collagen synthesis, this formulation actively supports their activity and encourages the production of new collagen fibres. This concerted effort helps counteract the natural decline in collagen biosynthesis associated with aging, ultimately improving skin firmness and minimising the appearance of fine lines and wrinkles.

Skin resilience and skin condition is supported by enhancing the antioxidant and barrier functions of the skin to improve the skin's overall condition, hydration, and increase its regulatory ability. Supernatural Crème Riche harnesses a complex blend of phytolipids that aid in fortifying the skin's barrier, in turn protecting against external aggressors and transepidermal water loss to support an increase in skin hydration and reduction in reactivity.

Phase 1: Formulation Validation

While each individual ingredient selected possesses its own supportive data, the Supernatural Face Crème Riche has also had its efficacy validated at a formulation level. Emma Lewisham formulations are designed to trigger a synergistic network of activity in the skin; therefore, this validation process also enables the measurement of the impact of this coordinated activity on the overall product efficacy.

Impact Investigated	Methodology Summary	Results
Impact on collagen synthesis	<i>In vitro</i> testing using cultured human fibroblasts. 24 hour incubation period. Assayed for Type I Collagen concentration post assay – comparative to control. Trinity Bioactives, 2020.	Confirmation of stimulation of collagen production demonstrated.
Comparative performance to leading market brands	<i>In vitro</i> testing using cultured human fibroblasts. 24 hour incubation period. Assayed for Type I Collagen concentration post assay compared with leading in-market products. Trinity Bioactives, 2020.	Highest stimulation of collagen production achieved by Crème Riche compared with market comparisons.
Impact on wrinkles and biomechanical properties (elasticity)	<i>In vivo</i> testing using 30 women over 8 weeks. Analysed via polymer skin imprints and imaging. Eurofins, 2022.	‘Overall, the product has a tendency to improve the appearance of wrinkle depth, number of wrinkles, and skin elasticity after 12 weeks’ – <i>Conclusion statement by independent testing party.</i>

Formulation enhancement and achieving collagen bookending

Phase 2: Formulation Design

The objective of Phase 2 was to enhance the formulation's efficacy, increasing collagen production even further while decreasing its degradation, delivering longer lasting, deeper hydration, as well as enhancing the complexion.

To enhance hydration and moisture retention, additional types of Hyaluronic Acid were introduced, including Sodium Acetylated Hyaluronate which has an innovative ability to penetrate the skin deeper and resist degradation from hyaluronidase, the skin's enzyme that breaks down hyaluronic acid. Resistance to degradation means that Hyaluronic Acid lasts longer in a 'ready to use' state. The half-life of this unique form of Hyaluronic Acid is demonstrated to be up to 13 times longer than traditional hyaluronic acids. The skin uses hyaluronic acid to facilitate moisturisation, plumping and regeneration⁷.

Structural support is further targeted through the incorporation of a plant-sourced derivative of Human Tripeptide-1, delivered using a microencapsulation delivery system which has an extract from Ginseng on its surface to help protect it from the skin's peptidases which naturally break down peptides. Bioactivity is increased through this innovative microencapsulation and protection against enzymatic degradation. This specialised version of Human Tripeptide-1 has been harnessed as it is

natural to several tissues around the body. In the skin, it can be released when the skin is damaged to help to signal repair mechanisms. By delivering it topically to the skin, we can enhance these skin mechanisms without requiring the skin to first be damaged, in turn strengthening the skin's structure by impacts such as an increase in collagen synthesis. In addition, while Phase 1 of product formulation focussed on increasing collagen synthesis, in Phase 2 focused on also decreasing its degradation, creating a collagen bookending effect. The activity of enzymes responsible for collagen degradation (matrix metalloproteinases) were measured and it was validated that Supernatural Face Crème Riche effectively inhibited their action. This dual action approach of collagen stimulation and degradation inhibition promotes the preservation of the skin's structural integrity, further enhancing its firmness and reducing the visible signs of aging.

Skin resilience and condition was enhanced in Phase 2 through the introduction of Gigartina Stellata extract, which targets increased rejuvenation of the skin's surface. An extract from a marine dwelling plant, it shows an ability to support the epidermis' renewal process. By supporting the renewal of the skin's surface cells, it delivers fresher looking skin.

Phase 2: Formulation Validation

To validate the target formulation enhancements at a mechanistic level, independent *in vitro* testing was performed to validate the ability of Supernatural Face Crème Riche to inhibit Matrix Metalloproteinase (MMP) Activity.

Impact Investigated	Methodology Summary	Results
Impact on matrix metalloproteinase (MMP) activity	<i>In vitro</i> testing using cultured human fibroblasts. 24 hour incubation period. Comparative to control. Trinity Bioactives, May 2023.	73% inhibition of MMP activity.
Impact on matrix metalloproteinase (MMP) activity	<i>In vitro</i> testing using cultured human fibroblasts. 24 hour incubation period. Comparative to in-market leading brands. Trinity Bioactives, May 2023.	Highest level of inhibition of MMP activity compared with market comparisons.

Supernatural Face Crème Riche Summary

Emma Lewisham's Supernatural Face Crème Riche represents a skincare solution that addresses the multi-dimensional challenges associated with aging skin. Through a scientifically formulated approach, this product leverages key ingredients to interact with the underlying physiological processes - targeting collagen stimulation, fibroblast support, collagen degradation inhibition, and optimal hydration to combat the effects of aging.

References

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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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