

# GATTEFOSSÉ

• PERSONAL CARE

## Eyeglorius™

Brilliance with every blink

Actives

+++



People make our name

# Oil-soluble bioactive for dark circles and eye bags

- We sleep 1.5hrs less than 50 years ago with a negative effect! Visible signs of fatigue often manifest under the eyes. Dark circles and puffiness have become widespread cosmetic concerns, contributing to the perceived appearance of tiredness and aging on the face.

## The under-eye is the first area to show signs of fatigue and stress

Due to its distinctive anatomical structure, the under-eye skin is particularly reactive.

The thinnest area  
of the face

Signs of fatigue are easily visible

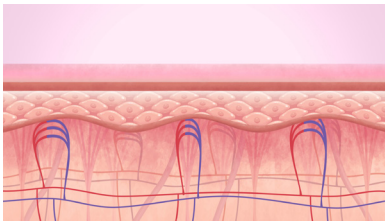
Abundantly vascularized  
& innervated

Making it highly responsive  
towards stress

At the cross-roads of  
age-sensitive  
subcutaneous structures

Weakening of tissues over time  
and under stress

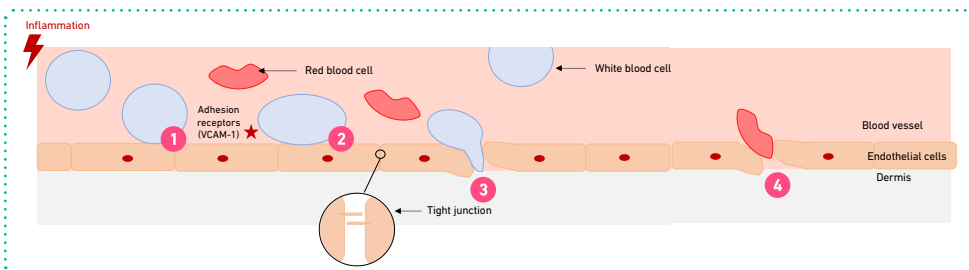
## What is microcirculation?



Cutaneous microcirculation encompasses the intricate network of blood and lymphatic capillaries strategically designed to deliver oxygen and nutrients to various layers of the skin.

Within these capillaries, a cohesive mat of endothelial cells, connected by tight junctions, acts as a barrier between fluids and the surrounding dermal tissue.

In case of aggression or injury, the extravasation process controls the return to equilibrium by increasing vascular permeability and organizing the passage of white blood cells into the dermis.



### Did you know?

The extravasation process is part of the immunity reaction.

When adhesion receptors, like VCAM-1, are activated **1**, white blood cells stick to the endothelial cell membrane, rolling over it **2** until they leak upon the opening of tight junctions **3**. At the same time, smaller-sized red blood cells passively escape through the same openings **4**.

## The under-eye area reflects disorders of skin microcirculation

In the very thin and reactive sub-ocular region, microcirculation dysfunctions induced by stressors such as UV, pollution, and fatigue are notably visible.

Excessive vascular permeability, a result of extravasation, is evidenced by two symptoms:

- The leakage of white blood cells initiates the accumulation of plasma, also known as edema, or more commonly puffiness.
- Concurrently, the accumulation of hemoglobin triggers oxidation and hyperpigmentation, giving rise to dark circles.

## A multi-skilled active solution aligned with hybrid beauty

In response to the trend towards skinification in makeup, Gattefossé sought to provide cosmetic brands with a comprehensive solution. Leveraging the expertise of its specialists in plant sourcing, chemistry, process development, and substantiation, the company formulated a distinctive lipophilic active capable of addressing both dark circles and puffiness.

This innovative ingredient, resistant to heat, opens up a myriad of possibilities for skincare and makeup formulations.



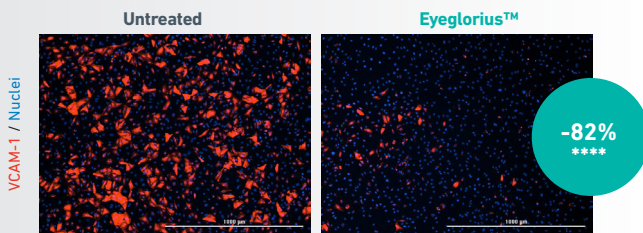
# Securing microcirculation

Dark circles and eye bags result from stress-induced local inflammation that increases vascular permeability and alters microcirculation.

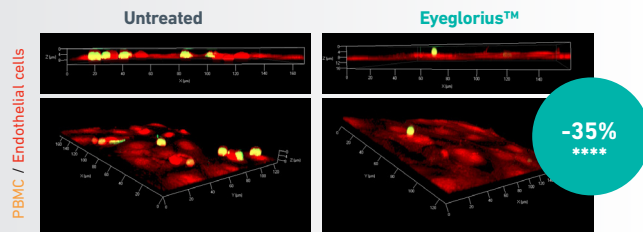
Eyeglorius™ helps to control the extravasation process and strengthens the structure of capillaries. Doing so, it prevents fluid leakage in the sub-ocular area and the onset of signs of fatigue.

## Regulation of the extravasation process

### VCAM-1 CONTENT<sup>(1)</sup>



### ADHERENT LEUKOCYTES<sup>(4)</sup>



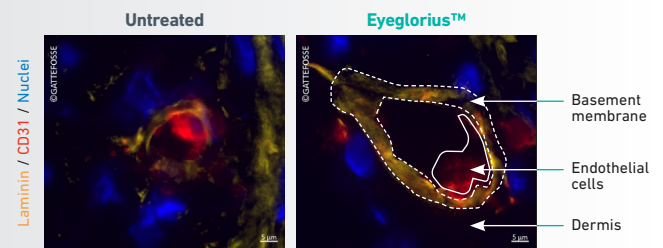
Under stress, Eyeglorius™ reduces the synthesis of adhesion molecules and the adherence of leukocytes to the endothelial cell membrane (step 1 and 2 of the extravasation process).

## Strengthening of the endothelial barrier function

### TRANS-ENDOTHELIAL ELECTRICAL RESISTANCE<sup>(2)</sup>



### WELL-COHESIVE CAPILLARY STRUCTURE<sup>(3)</sup>



Eyeglorius™ enhances endothelial cell cohesion, safeguarding vascular integrity and preventing fluid leakage into the extracellular space.

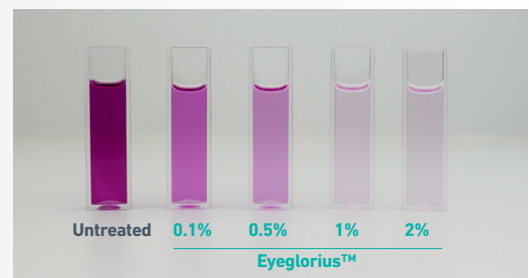
## Regulation of hyperpigmentation

HMOX-1 is an enzyme involved in the proper degradation of hemoglobin. By increasing its expression and chelating ferrous ions, Eyeglorius™ promotes the degradation of hemoglobin, whose accumulation is a key contributor to under-eye hyperpigmentation.

### HMOX-1 GENE EXPRESSION<sup>(4)</sup>



### ANTI-OXIDANT POTENTIAL<sup>(5)</sup>



<sup>(1)</sup> Monolayer cultures of human dermal microvascular endothelial cells, treated with 0.025% of Eyeglorius™, then stressed with TNF-α.

<sup>(2)</sup> Monolayer cultures of human dermal microvascular endothelial cells, treated with 0.01% of Eyeglorius™, then stressed with TNF-α.

<sup>(3)</sup> 3D vascularized dermis model, treated with 0.2% of Eyeglorius™ and stressed with TNF-α.

<sup>(4)</sup> Monolayer culture of normal human dermal fibroblasts from eyelids, treated with 0.025% of Eyeglorius™.

<sup>(5)</sup> *In tubo* test – colorimetric assay - Chelation of ferrous ions

\*\*\*\* p<0.0001 / \*\*\* p<0.001

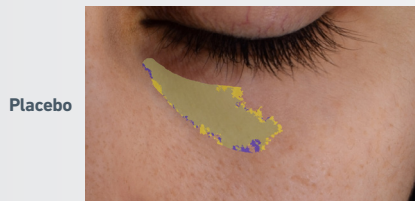
# Shadows and puffiness fade away

Two clinical studies<sup>(6)</sup> confirm Eyeglorius™ performance in the alleviation of signs of fatigue. Dark circles and eye bags are visibly reduced, and a sparkling and re-energized look is revealed.

## Lighter and visibly smaller dark circles

### ANALYSIS OF 2D ACQUISITIONS COLOR AND SURFACE

	Placebo	Eyeglorius™
ITA°	-7.4%	+19.2%*
L*	-0.9%	+2.8%*
SURFACE	+2.9%	-4.7%*



■ Surface at D0 ■ Surface at D28

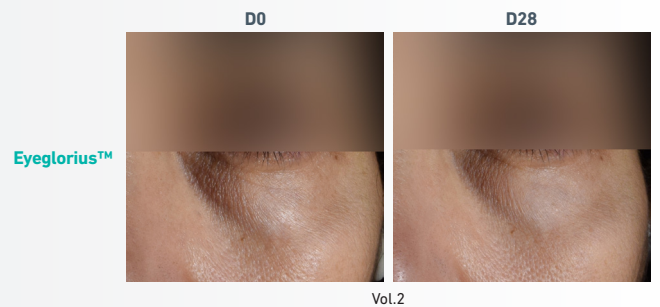
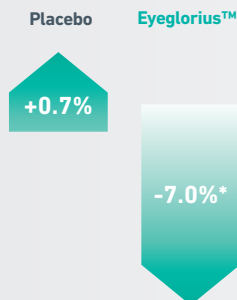


### CLINICAL SCORING - DARK CIRCLES

	Placebo	Eyeglorius™
Overall visibility	-8.5%	-13.1%*
Color intensity	-8.0%	-12.8%*
Surface	-7.8%	-13.9%*

## Reduced eye bags

### ANALYSIS OF 2D ACQUISITIONS VOLUME



### CLINICAL SCORING - UNDER-EYE BAGS

	Placebo	Eyeglorius™
Visibility	-9.1%	-13.9%*
Volume	-10.4%	-16.5%*
Tired look	-5.4%	-9.5%*

<sup>(6)</sup> 28-days clinical tests on 30 Caucasian women, presenting dark circles of vascular origin, and 31 Caucasian women, presenting eye bags linked to insufficient lymphatic drainage. Double-blind studies, 2% active vs. placebo with twice daily application of the creams, on split face.

Figures presented: Variation % D28 / D0

2D analysis: n=19 / Clinical scoring on dark circles: n=23 / 3D analysis on volume: n=21 / Clinical scoring on under-eye bags: n=24

\*Statistical difference vs. placebo (p < 0.05)

# Eyeglorius™

Triterpenoid acids (Guaranteed content)

Phytosterols

Specifically chosen for their efficacy on skin microcirculation and the reduction of inflammation-induced vascular permeability

Derived from the upcycled leaves of sea buckthorn (*Hippophae rhamnoides*), Eyeglorius™ harnesses the extraordinary phyto-chemical richness of the plant.

A nutritional powerhouse, rich in health-supporting molecules, sea buckthorn is widely used in food or herbal medicine. Phenolic acids, lipophilic compounds, vitamins, or organic acids endow the plant with impressive anti-inflammatory and antioxidant properties.

Gattefossé sources the under-utilized sea buckthorn leaves from a family-owned orchard in Quebec, Canada, committed to organic cultivation and the transformation of berries into food items. Leaves are upcycled from the annual harvest of the fruit branches.



## THE TECHNOLOGY BEHIND

To achieve a lipophilic ingredient, Gattefossé developed a streamlined process utilizing supercritical CO<sub>2</sub> technology in conjunction with a co-solvent. This method exhibits a unique affinity for extracting apolar compounds along with a controlled environmental imprint. Non-toxic, effective at low temperatures, and preserving delicate phyto-molecules, it guarantees extraction performance, quality, safety, and energy efficiency, aligning with our industrial and CSR commitments. Following extraction, solvents are removed, and the resulting dry material is solubilized in a biobased oily compound (Octyldodecyl Myristate).

## Claims

- Secures microcirculation
- Improves the endothelial barrier function
- Regulates under-eye hyperpigmentation
- Fades dark circles
- Reduces puffiness
- Limits signs of fatigue

## Applications

- Lipophilic, heat-resistant active ingredient
- Suitable for O/W, W/O, stick or one-pot formulas
- Eye care, eye contour treatments
- Makeup: concealers, tinted creams
- Skin care: radiance creams

## INCI

Octyldodecyl Myristate (and) Hippophae Rhamnoides Extract



The information given in this brochure is presented in good faith and we believe that it is correct at the moment of printing, but no warranty as to accuracy of results or fitness for a particular use is given. It cannot substitute for indispensable preliminary tests that must be conducted to ensure product suitability for each intended use. Nothing herein shall be construed as a recommendation or license to use any information that conflicts with any patent or trademark of our company or others. We make no representations or warranties, express or implied that any use of this information will not infringe any such patent or trademark. The user's attention is also drawn to the possible risks incurred if a product is used for a purpose other than its designed purpose. The user shall be solely liable for the precautions taken relevant to the use made of the products. This information does not exempt the user from ensuring that he may possibly come under other obligations pursuant to laws or regulations other than those indicated relating to the possession and manipulation of the product for which he shall be solely liable.

Reproduction or use of any of the images contained herein without Gattefossé's prior approval is strictly prohibited.





EYEGLIORUS-GB-2K77-CP (?????) 2024

**GATTEFOSSÉ** ● CORPORATE HEADQUARTERS

36 chemin de Genas - CS 70070 - 69804 Saint-Priest Cedex - France  
+(33) 4 72 22 98 00

[www.gattefosse.com](http://www.gattefosse.com)



People make our name