

 **BASF**

The Chemical Company

Beauty Creations  
*The Passion for Beauty*



**SHADOWNYL™**

The eye contour luminizer

**1 | The Challenge**

**2 | The Solution**

**3 | Efficacy Data**

**4 | Summary & Conclusion**

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# Skin Around the Eyes

## Special Features at a Glance

All of these factors make the eye area the first place where signs of aging appear on the face.

No virtually  
sebaceous glands

Dryness  
& Fine lines

Low vascularization &  
lymphatic activity

Puffiness

Less collagen and  
elastin

Sagging skin,  
more visible dark  
circles & wrinkles

Thinnest skin

Visible dark  
circles

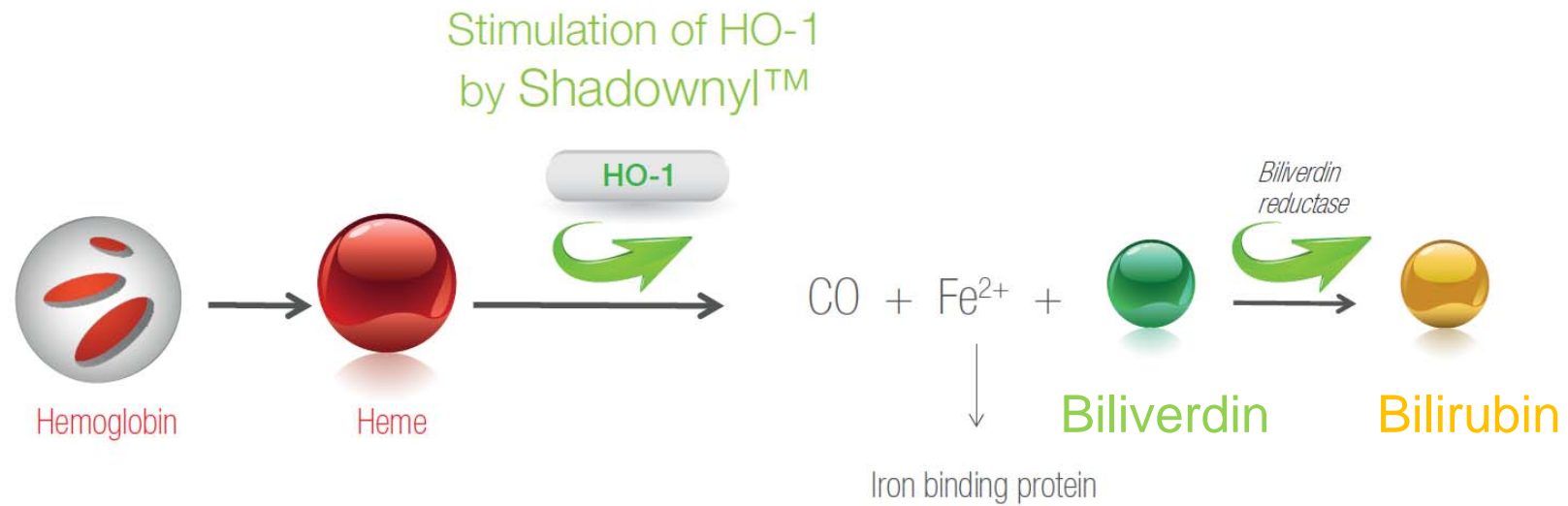
The most mobile  
area

Redness

# The New Target

## Heme Oxygenase-1 (HO-1)

HO-1 catabolizes the degradation of heme into helpful by-products



Pro-inflammatory  
Cytotoxic  
Pro-oxidant

Anti-inflammatory  
Anti-apoptotic  
Antioxidant

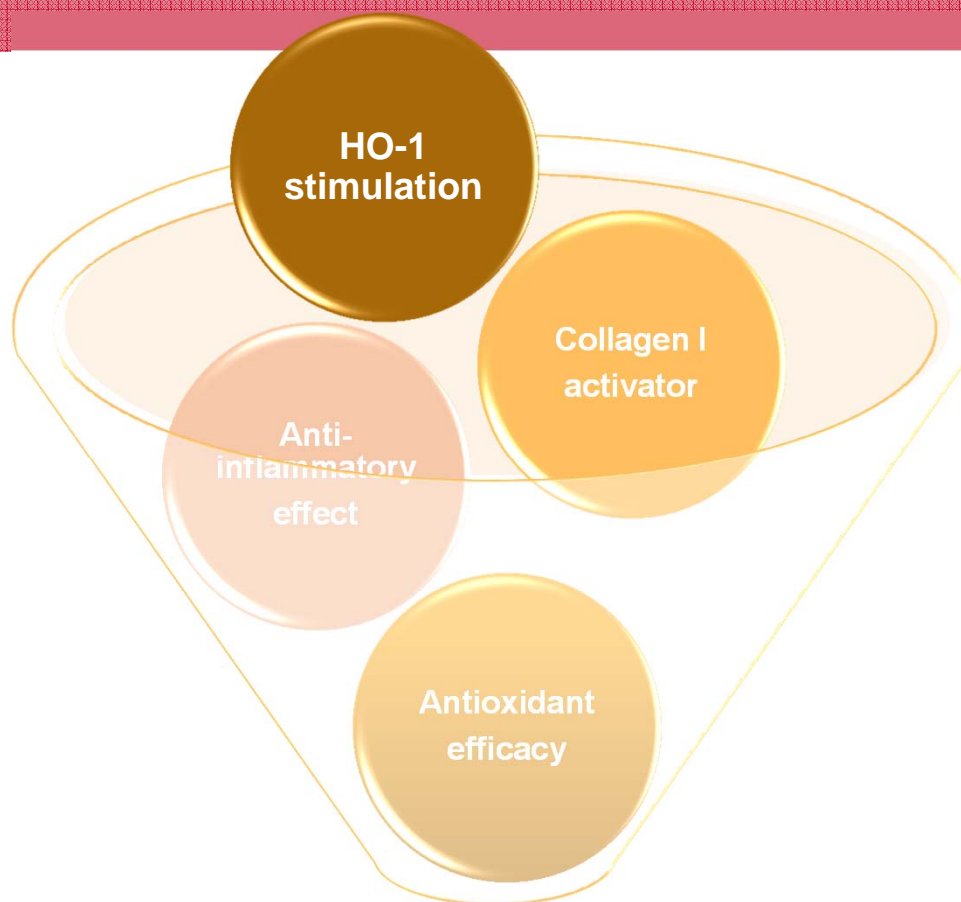
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# A Multifunctional Approach



**Shadownyl™**

# Shadownyl™

Why is it unique?



## An aqueous *Fucus vesiculosus* extract



Class/Family:  
*Phaeophyceae/Fucaceae*

## Its origin

- ◆ **Harvested by hand for its premium quality** from spring to autumn in the vicinity of the Gulf of Maine on the east coast of Canada.
- ◆ **Certified organic wild algae fertilized by the nutrient-rich water of the shores of Gulf.**
- ◆ **From a world-class natural wonder, pollutant free region protected by USA and Canada.**
- ◆ **USA & Canada currently maintain complementary embargoes against offshore oil and gas exploration activities in the Gulf highlighting the importance of this marine habitat.**



**1 | The Challenge**

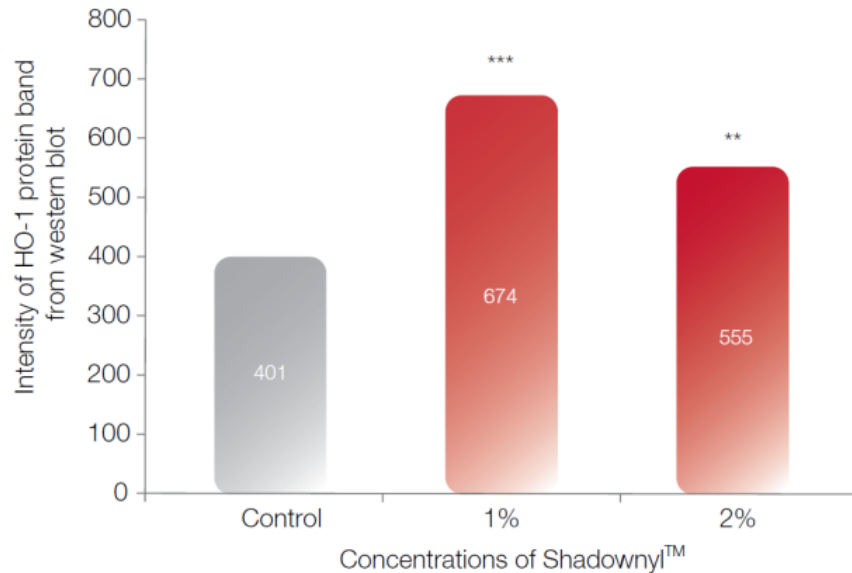
**2 | The Solution**

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# HO-1 Stimulation

Shodownyl™ provides effective induction of HO-1 protein in fibroblasts

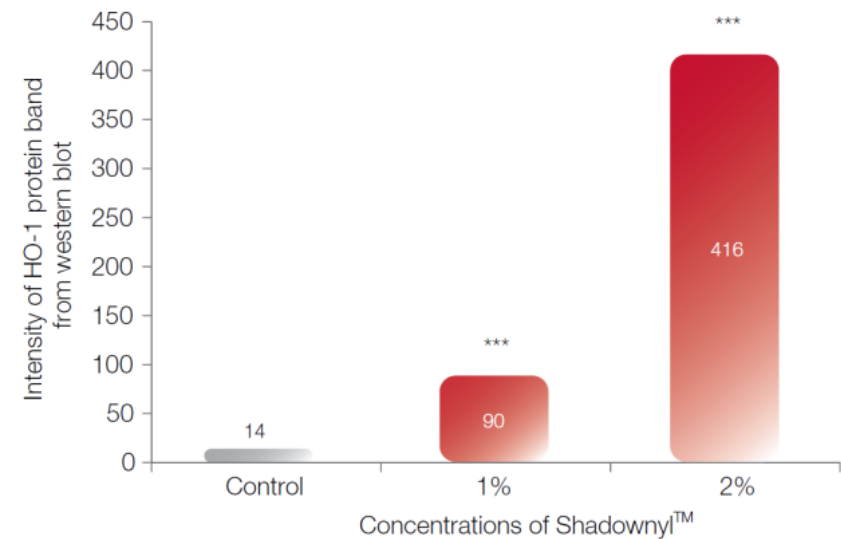


*In vitro* study

Western blot on protein HO-1 level by treatment of Shodownyl™ in Fibroblasts.

Mean ± SD on 3 assays – Paired Student's t test - \*\*p < 0.01- \*\*\*p < 0.001

Shodownyl™ provides effective induction of HO-1 protein in keratinocytes

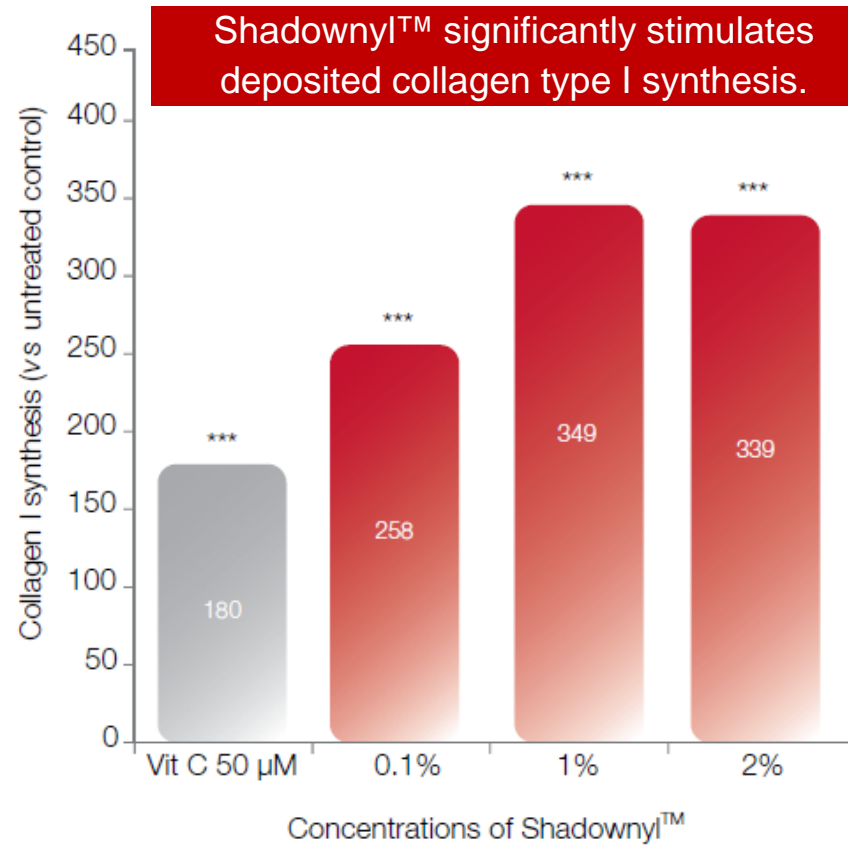


*In vitro* study

Western blot on protein HO-1 level after treatment by Shodownyl™ in keratinocytes.

Mean ± SD on 3 assays – Paired Student's t test - \*\*p < 0.01- \*\*\*p < 0.001

# Collagen I Stimulation



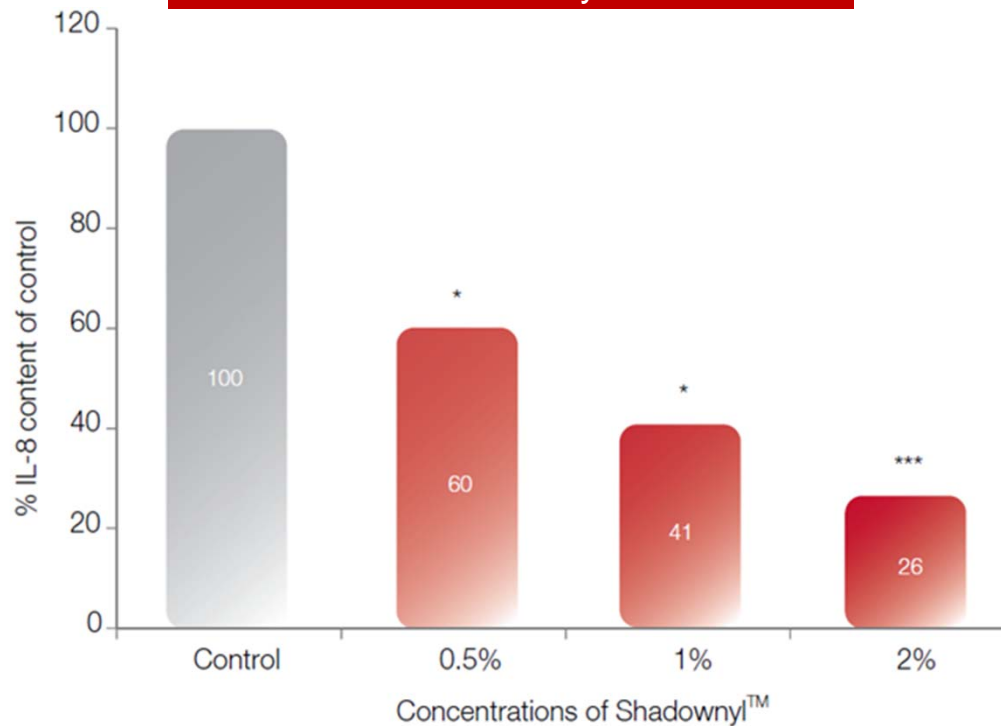
Mean ± SD on 3 assays in triplicate – Student's t test - \*:  $p < 0.05$  - \*\*\*:  $p < 0.001$ .

*In vitro* study

Dosage of deposited collagen I quantified by using our patent pending method (DELFI<sup>®</sup>A).

# Anti-Inflammatory Effect

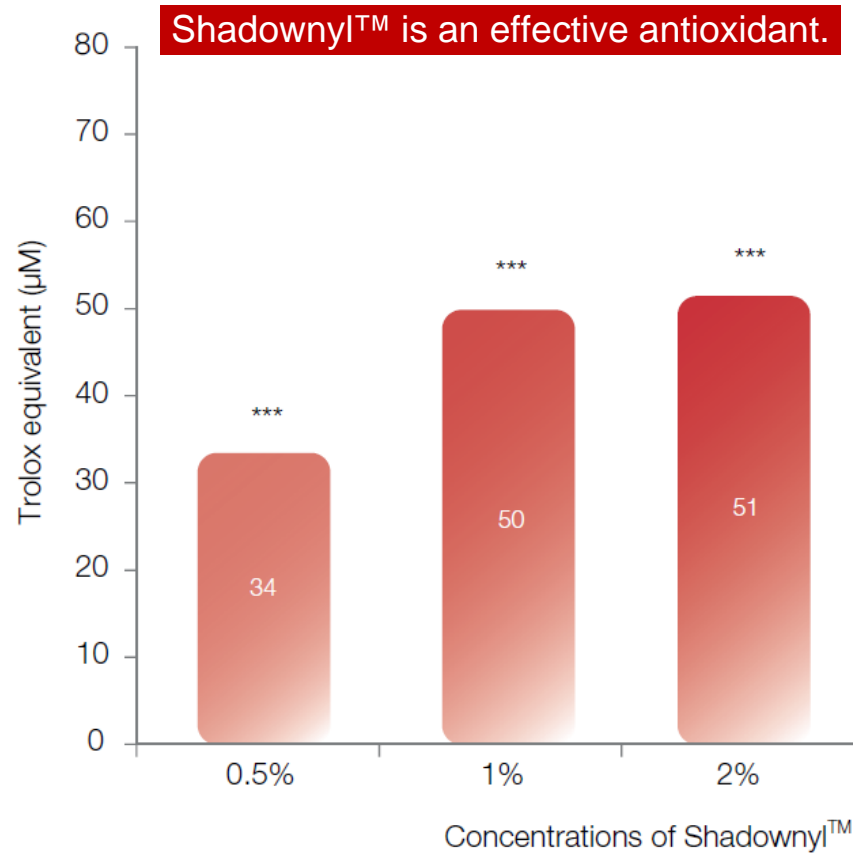
Shadownyl™ provides a dose responsive anti-inflammatory effect.



*In vitro* study

Measurement of the decrease in IL-8 levels by the treatment of keratinocytes with Shadownyl™ while being stimulated by IL-1b.

# Antioxidant Efficacy



*In vitro* study  
Evaluation of the free radical scavenging  
properties using DPPH method.

Mean ± SEM on 3 assays in triplicate - Student's t test - \*\*\*: p<0.001.

# Dark Circles Color

## After ONLY 2 week treatment with 2% Shadownyl™

### FIRST *in vivo* study

- Shadownyl™ at 2%, twice a day application using fingertips to gently smooth the product over the eye area
- 27 Caucasian women aged between 18-65 years old with dark circles
- Analysis of images from the Canfield VISIA-CR®



Before treatment



2 weeks

\*statistically significant vs. baseline

**Visible decrease of dark circle color**

# Dark Circles Area

**After ONLY 2 week treatment with 2% Shadownyl™**

89% of panelists felt the eye area had a smoother texture



74% of panelists felt the eye area looked more visibly refreshed



2 weeks

Area of dark circle before treatment

Area of dark circle after 2-week treatment

\*statistically significant vs. baseline at both 1 and 2 weeks

**Visible decrease of dark circle area**

# Wrinkles Visible Anti-wrinkle Effect

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## After ONLY 1 week treatment with 2% Shadownyl™

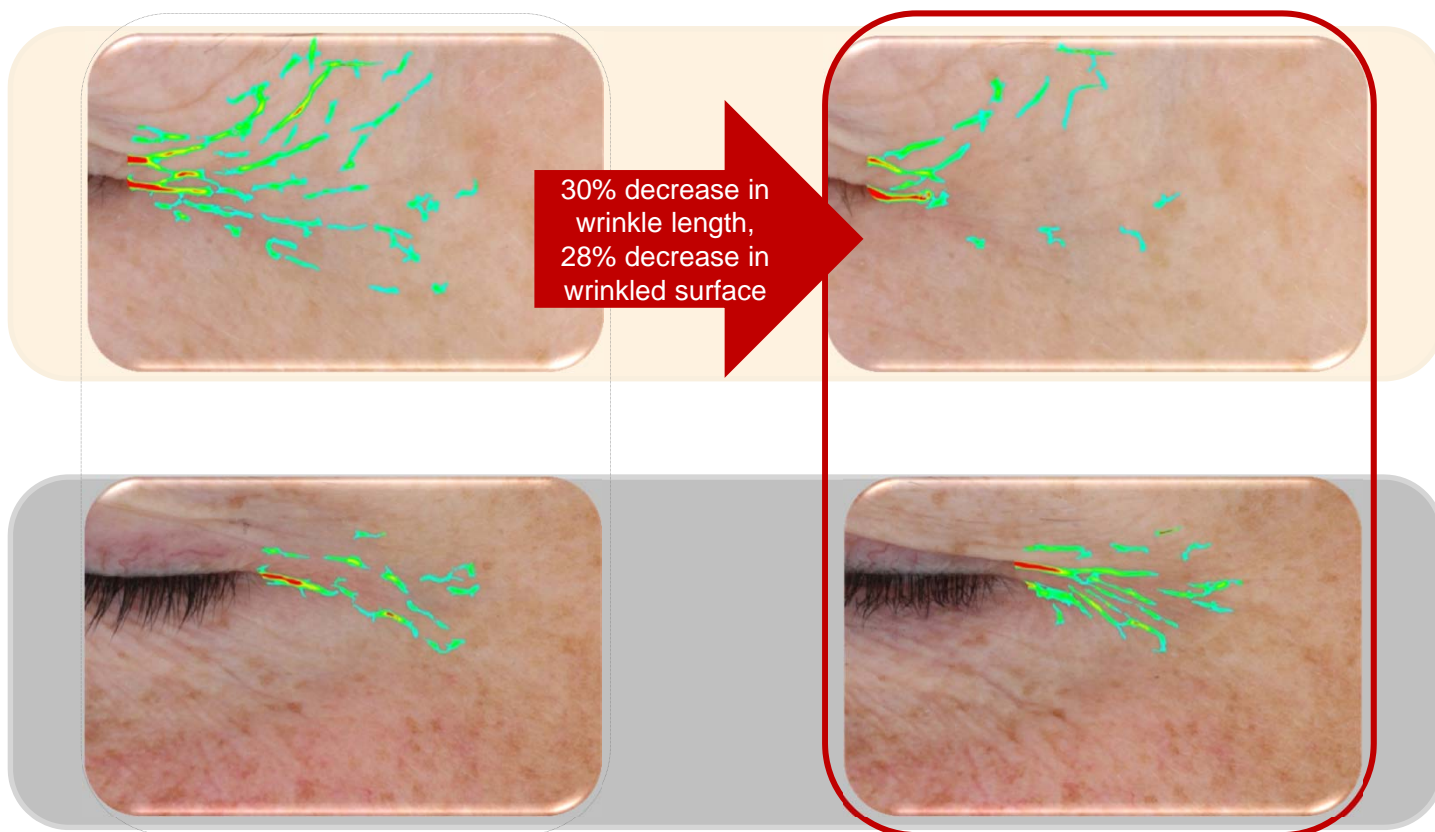
Before treatment

1 week

**Group 1:  
2% Shadownyl™**

**SECOND** *in vivo* study  
• Shadownyl™ at 2% (Group 1)  
• Placebo cream (Group 2)  
• Twice daily application  
• 22 Caucasian women aged between 36-65 years old with fine lines and crow's feet wrinkles (2 groups)  
• Analysis of images from the Canfield VISIA-CR®

**Group 2: placebo**



Care  
Creations™



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# Shadownyl™ R11026

## Summary of Tests



### In vitro

- Heme oxygenase-1 stimulation in keratinocytes and fibroblasts – breaks down Heme into antioxidant and anti-inflammatory compounds, reducing dark color
- Collagen synthesis
- Antioxidant activity
- Anti-inflammatory effect

### In vivo (quantitative measurements)

In only 2 weeks....

- Decreases dark circle color and area

In only 1 week....

- Decreases wrinkle length by 30% and total wrinkled surface by 28%

# Shadownyl™ R11026

## The Eye Contour Luminizer

INCI: Water, Algae Extract, Hexylene Glycol, Capryl Glycol, Xanthan Gum



### Product Properties

**Dose of use:** 2%

**Solubility:** water-soluble

**Shelf life:** 12 months

**Preservatives:** none

### Benefits & Unique Selling Point

- In ONLY 1 WEEK, provides a significant anti-wrinkle effect
- Within 2 weeks, lightens and reduces the appearance of dark circles
- Stimulates expression of the novel pathway, HO-1
- Boosts the elimination of heme due to blood leakage, which is responsible for dark circles and local inflammation
- Rejuvenates and refreshes eye contour: enhances skin firmness and reduces the appearance of dark circles

*Formula suggestion: Illuminating Eye Gel Cream SC-US-13-31661-69-1*

### Chinese Regulations

MOH 2003 <sup>(1)</sup>	INCI 2007 <sup>(2)</sup>	INCI 2010 <sup>(3)</sup>	IECSC <sup>(4)</sup>	IECIC <sup>(5)</sup>
✓	✓	✓	✓	✓

(1)

INCI name/plant name whether or not listed in 'MOH Approved Used Cosmetic Ingredients (2003)

(2)

INCI name whether or not listed in "International Cosmetic ingredient standard Chinese name"(2007 version)

(3)

INCI name whether or not listed in "International Cosmetic ingredient standard Chinese name"(2010)

(4)

INCI name whether or not listed in "IECSC (Inventory of Existing Chemical Substances (October 2010)

(5)

INCI name whether or not listed in "IECSC (Inventory of Existing Chemical Substances (2012-2013, batch #1-3)

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