

CYTOBIOL™ LUMIN-EYE



A BRIGHTER LOOK

The eye contour is a unique zone, very different from the other parts of the face. The eyes are sometimes described as being "the window to the body" as they reflect our general state of health. Short nights or early wake-up, stress, tiredness... the consequence is too often seen under our eyes!

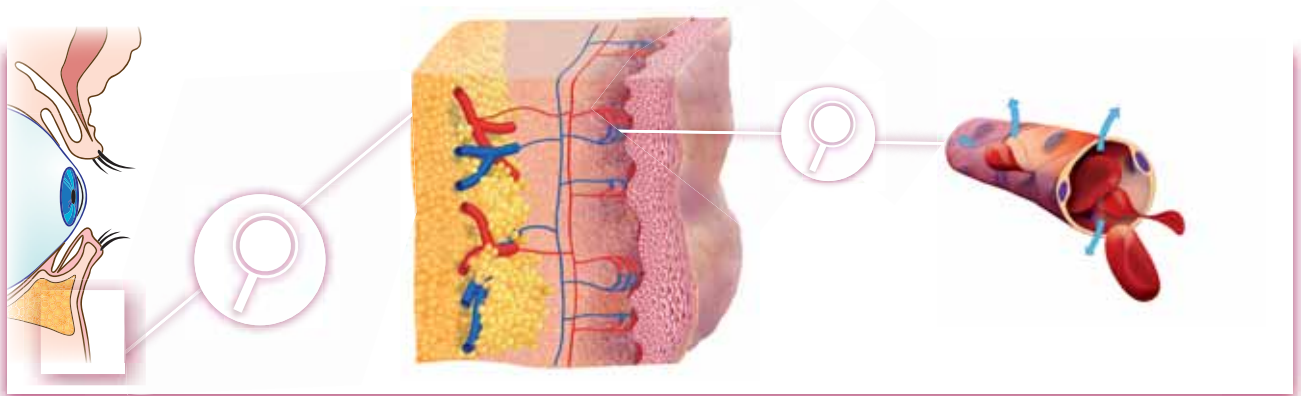
Puffy eyes concern 8 women out of 10 and up to 1 in every 2 men. They are the result of a complex problem, due to a number of physiological mechanisms.

CYTOBIOL™ LUMIN-EYE

is the solution developed by Gattefossé in order to tackle simultaneously each of the mechanisms responsible for premature ageing of the eye area.

Puffy eyes: a multi-cause disorder

The eye contour is a particularly sensitive zone easily marked by the accumulation of tiredness and age.



The bags and puffiness which weigh down the glance are due to a weakness in our blood and lymphatic capillaries.

Poor drainage of the interstitial fluids creates a water or lymph accumulation which generates under-eye puffiness.

Moreover, this local edema will induce inflammation and local distension of tissues, increasing the puffy effect.

Age also contributes to the phenomenon, the decrease of skin firmness generating an accumulation of fat clusters under the eyes.

To fight against the under-eye bags, various actions should be taken:

- Increase blood microcirculation and lymphatic drainage
- Strengthen blood capillaries
- Reinforce and protect supporting tissues to prevent a decrease in skin firmness.



CYTOBIOL™ LUMIN-EYE...

CYTOBIOL™ LUMIN-EYE is made of an **Ash tree bark extract**, **organic silicon** and **vitamin B3**.

Each ingredient was carefully selected for its targeted action on one or the other of the causes of the formation of bags. It is the **complementarities of action** of these components which gives its power to CYTOBIOL™ LUMIN-EYE.

The ash bark extract

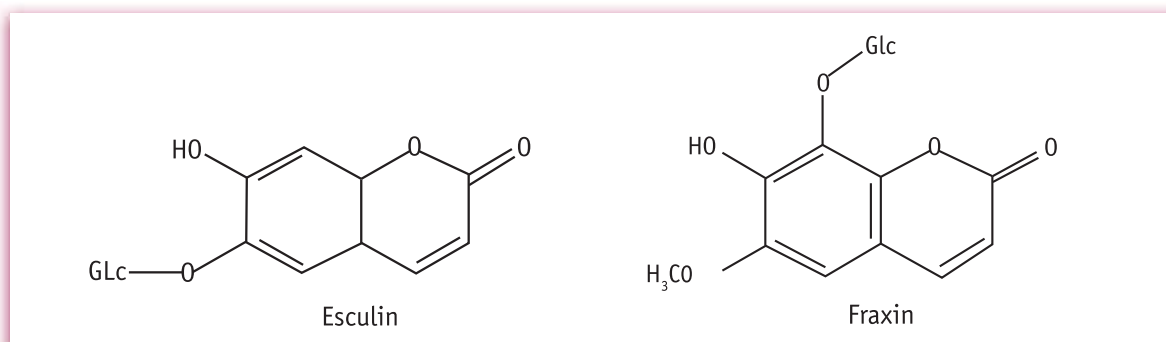
The high Ash (*Fraxinus excelsior*) is a large common tree found in European forests.

It draws its name from Latin *fraxinus*, "lightning", because its height of up to 40m attracts lightning.

Its bark contains **esculin** and **fraxin**, two heterosides known to actively **decrease the permeability of blood capillaries**. This activity, known as "vitamin P activity" (P for permeability), confers a veinotonic and vasculo-protective action to CYTOBIOL™ LUMIN-EYE.

Moreover, the fraxin and the esculin present **antioxidant activity** to help protect the blood capillaries, but also to fight against the degradation of Hemoglobin and thus reduce coloration under the eyes.

CYTOBIOL™ LUMIN-EYE is **titrated in esculin and fraxin**, in order to **guarantee the effectiveness and the reproducibility of the extract**.



Organic silicon

Silicon (Si) in its organic form is one of the components of the Extra Cellular Matrix: it is found in glycosaminoglycans, elastin and collagen, of which it stimulates the synthesis.

Silicon is also an important constituent of the arterial wall. It helps **reinforce the structure and elasticity of the vessels**, mainly by its interaction with collagen and the elastin fibres: it functions as a cross-linking agent, restructuring the fibres of collagen and elastin and providing **strength, flexibility** and resilience to connective tissues.

Organic silicon helps reinforce capillaries structure, completing the action of esculin and fraxin.

Vitamin B3

The vitamin B3 (known also as vitamin PP) is a water-soluble vitamin, which groups 2 molecules of similar biological activity, **niacin** and **niacinamide**, at the origin of two major coenzymes for the organism.

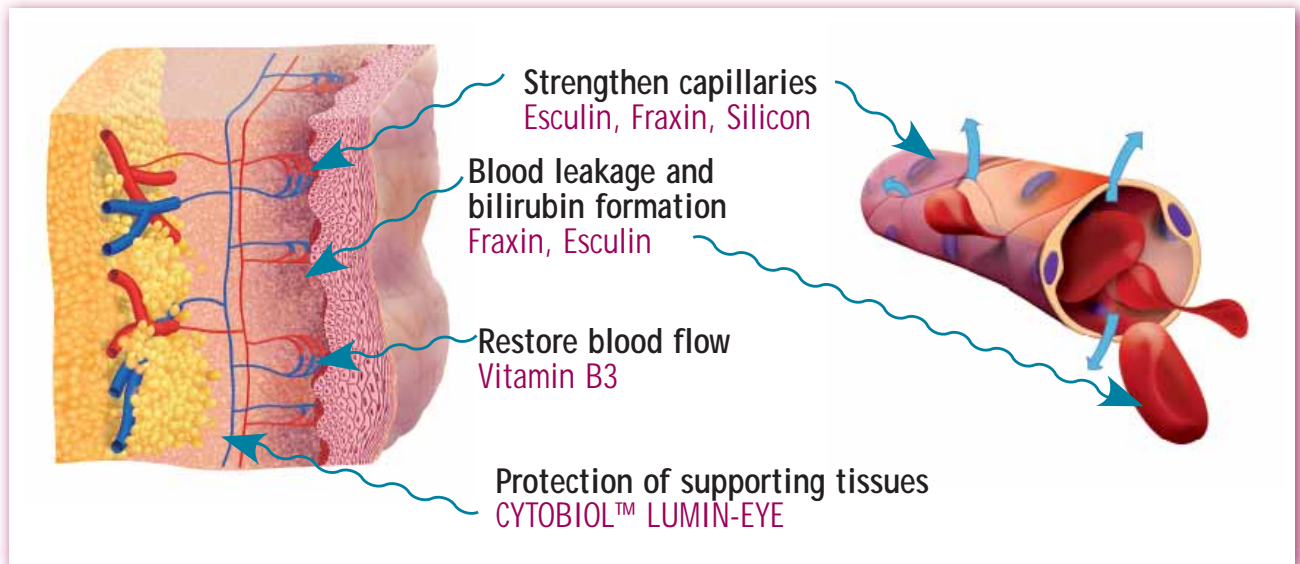
It is only very recently that its beneficial effect for anti-age applications was highlighted.

Various studies show the ability of vitamin B3 to stimulate collagen synthesis and to reinforce the barrier function of the skin. It is therefore capable of protecting from the damaging effects of UV.

The vitamin B3 helps reinforce the structure of the basal layer of the blood vessels, via its action on collagen synthesis. It thus helps to maintain or **restore a normal blood flow** in capillaries via its vasculo-protective action.

ACTIVE SYMPHONY

Due to the synergistic action of these 3 components, CYTOBIOL™ LUMIN-EYE will attack each of the causes leading to the appearance of bags under the eyes.

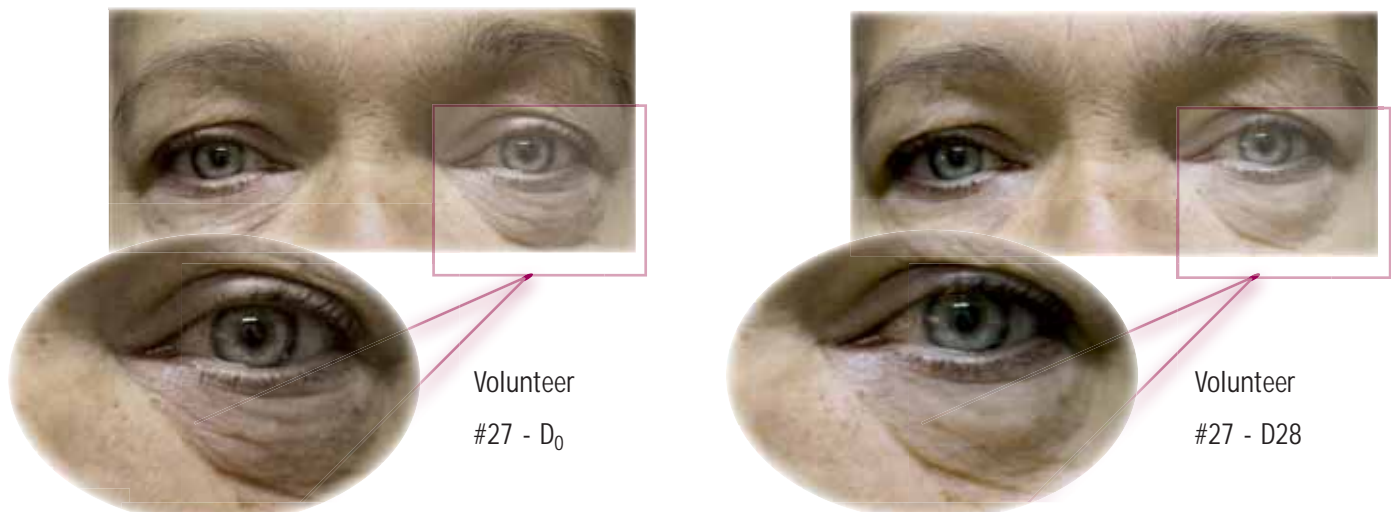


EFFECT ON THE UNDER-EYE BAGS

CYTOBIOL™ LUMIN-EYE has been tested at 5% in a gel-cream formulation, in order to evaluate its action on the **reduction of eye puffiness**. The study was carried out under dermatological control, during 28 days on 30 female volunteers (average age 47) presenting visible signs of insufficiency of lymphatic drainage.

A Visible result

The before/after photographs carried out show clearly how CYTOBIOL™ LUMIN-EYE reduces the volume of the under-eye bags.



The evaluation of the activity of CYTOBIOL™ LUMIN-EYE by the panelists was particularly positive after 28 days of treatment:

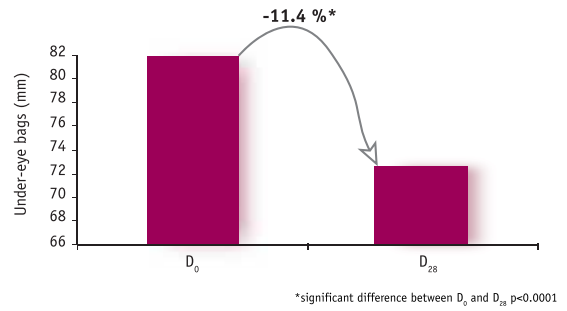
- 63% declare that it decreases strongly or fairly strongly the under-eye bags
- 77% of the panelists found that the skin of the eye contour is more toned
- 73% of the volunteers declare that the product is effective.

Dermatological scoring

The draining action of CYTOBIOL™ LUMIN-EYE was also evaluated by an experimented dermatologist. This **objective visual evaluation** shows that the volume of the **under-eye bags** was **reduced by 11.4%*** (very significant difference).

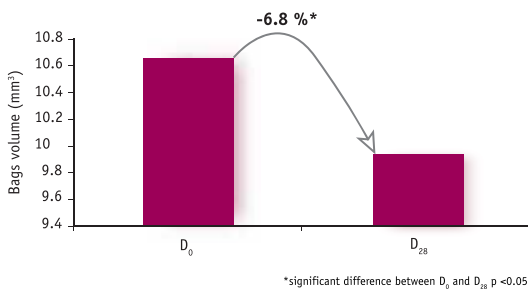
Moreover, the study shows that the results are independent of the age of the volunteers.

Decrease of under-eye bags – dermatological scoring



CYTOBIOL™ LUMIN-EYE will be suitable for **all ages** to prevent and treat under-eye puffiness.

Decrease of under-eye bags volume - fringe projection



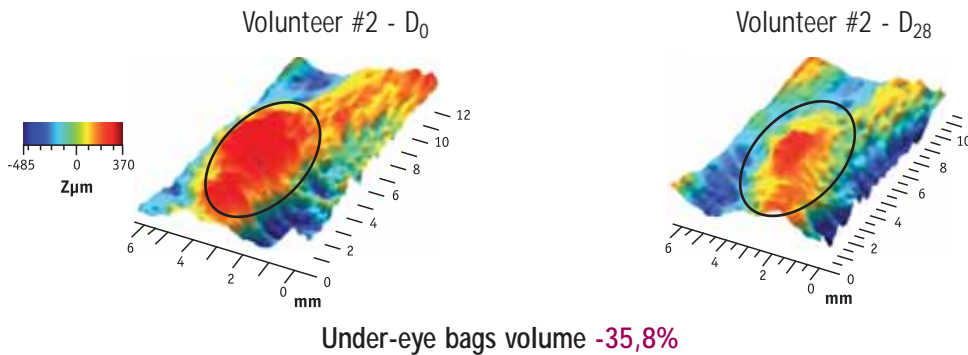
Volumetric measurement

The effect of CYTOBIOL™ LUMIN-EYE on the volume reduction of the under-eye bags was measured by **profilometric analysis using fringe projection**.

After 28 days of treatment, this test shows a **significant reduction** in the **volume of the under-eye bags**.

The average reduction on the 30 panelists is 6.8%* and is **up to 30%** for some volunteers.

Visualization using profilometric analysis by fringe projection of the efficacy of CYTOBIOL™ LUMIN-EYE on the volume of under-eye bags.



Thanks to its draining action and to the stimulation of the cutaneous microcirculation, CYTOBIOL™ LUMIN-EYE helps to visibly decrease under-eye puffiness. The eye contour is smoothed for a brighter look.



Volunteer #19 - D₀



Volunteer #19 - D₂₈

Under-eye bags volume **-17,4%**

APPLICATIONS

Thanks to the synergy of action of its components, CYTOBIOL™ LUMIN-EYE **relieves congestion** of the skin and **stimulates the skin microcirculation** to fight against the **appearance of under-eye puffiness**.

Fraxin and **esculin** allow elimination of the pigments responsible for skin coloration, **to erase the signs of tiredness**.

A synergistic and high performance complex, CYTOBIOL™ LUMIN-EYE can be used at 5% in all formulation types:

- Under-eye puffiness treatment
- Eye contour treatment
- Pre and post surgery treatment.

Its unique composition makes it the essential daily skin care ally of men and women of every age.

SPECIFICATIONS

Organoleptic characteristics:

Aspect.....limpid liquid yellow to dark amber

Physico-chemical characteristics:

Content in esculin and fraxin..... 0.2 to 1.2%

Solubilities at 20°C.....soluble in water, insoluble in oils

Transport and storage conditions:

Store at room temperature under nitrogen atmosphere. Prevent exposure to light.

Packing:

Industrial standard pack:..... aluminum can 5 kg

Samples:.....available

Regulatory:

INCI name: **Butylene Glycol (and) Water (and) Niacinamide (and)
Fraxinus Excelsior Bark Extract (and) Silanetriol and Potassium Citrate**

CAS n°:107-88-0/7732-18-5/98-92-0/84625-28-5/65351-55-5

EINECS n°:203-529-7/231-791-2/202-713-4/283-402-0/265-711-2

Approved for cosmetic use:..... Europe, USA, Japan and Australia

FORMULAS

LUMINOUS UNDER-EYE LOTION

JB 2426/A

INCI name	Trade name	%
I CETYL ALCOHOL (AND) GLYCERYL STEARATE (AND) PEG-75 STEARATE (AND) CETETH-20 (AND) STEARETH-20	EMULIUM® DELTA	2.50
PROPYLENE GLYCOL DIPELARGONATE	DPPG	3.00
CYCLOPENTASILOXANE (AND) CYCLOHEXASILOXANE		2.50
OCTYLDODECYL MYRISTATE	MOD	1.50
<i>PRESERVATIVE</i>		0.70
II DEMINERALIZED WATER		80.85
XANTHAN GUM		0.20
III ACRYLATES/ACRYLAMIDE COPOLYMER (AND) MINERAL OIL (AND) POLYSORBATE-85		0.75
IV ALUMINUM STARCH OCTENYL SUCCINATE		3.00
V BUTYLENE GLYCOL (AND) WATER (AND) NIACINAMIDE (AND) FRAXINUS EXCELSIOR BARK EXTRACT (AND) SILANETRIOL POTASSIUM CITRATE	CYTOBIOL™ LUMIN-EYE	5.00
		<u>100.00</u>

Disperse xanthan gum into water of II. Add III and mix well. Under rapid mixing (rotor stator 2000 rpm) add I heated to 75°C to II + III heated to 75°C. Maintain rapid mixing for about 5 min. Cool under stirring and at about 45°C, add IV. Maintain under rapid mixing (rotor stator 1500 rpm) for 5 min. At about 35°C, add V. Complete cooling.

FRESH WAKE UP CREAM

JB 2425/A

INCI name	Trade name	%
I TRIBEHENIN PEG-20 ESTERS	EMULIUM® 22	6.00
GLYCERYL STEARATE	GELEOL™	2.00
CETYL ALCOHOL		1.00
OCTYLDODECYL MYRISTATE	MOD	5.00
CAPRYLIC/CAPRIC TRIGLYCERIDE	LABRAFAC™ CC	1.50
ISOSTEARYL ISOSTEARATE	ISOSTEARATE ISOSTEARYLE	5.00
II DEMINERALIZED WATER		67.80
CARBOMER		0.20
III GLYCERIN		5.00
XANTHAN GUM		0.30
IV SODIUM HYDROXIDE (10% SOL.)		0.40
V BUTYLENE GLYCOL (AND) WATER (AND) NIACINAMIDE (AND) FRAXINUS EXCELSIOR BARK EXTRACT (AND) SILANETRIOL POTASSIUM CITRATE	CYTOBIOL™ LUMIN-EYE	5.00
VI <i>PERFUME</i>		0.80
		<u>100.00</u>

Sprinkle carbomer over water heated to 75°C. Prepare III and mix. Under stirring, add III to II, continue stirring for about 5 min. Heat I and II + III to 75°C. Under rapid mixing (rotor stator 3000 rpm), add I to II + III. Maintain rapid mixing for about 5 min. Add IV and maintain rapid mixing for about 5 min. Cool under planetary stirring and at about 35°C, add V and VI. Complete cooling.

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GATTEFOSSÉ is an independent, multinational company headquartered in France which creates, manufactures and distributes specialty products used as ingredients by the cosmetic and pharmaceutical industries. Present in almost 50 countries worldwide, GATTEFOSSÉ enjoys a strong know-how and position in lipochemistry, biology and extraction from natural sources.

GATTEFOSSÉ offers the cosmetic industry a variety of high performance products classified as:

- **BASES & ADDITIVES:** emulsifiers, coemulsifiers, emollients, dispersers, solubilizers, thickeners...
- **TRADITIONAL PLANT EXTRACTS**
- **SUBSTANTIATED ACTIVE INGREDIENTS** from vegetable, mineral and marine origins.

