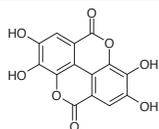




Specifications and Characteristics

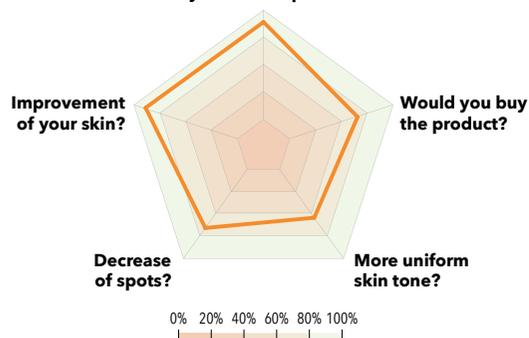
INCI	Ellagic Acid
CAS REG. N°	476-66-4
APPEARANCE	beige or yellow powder
PURITY	≥ 98.0 %
RECOMMENDED pH OF USE	3.0 ▶ 5.5
RECOMMENDED USE LEVEL	0.1 ▶ 1.0 %
ORIGIN	Derived-natural, 100% renewable carbon
NATURAL ORIGIN INDEX	1 (ISO 16128)

CHEMICAL STRUCTURE



Consumer assessment of Elage after 28 days of application at 0.5% use-level

Do you like the product?

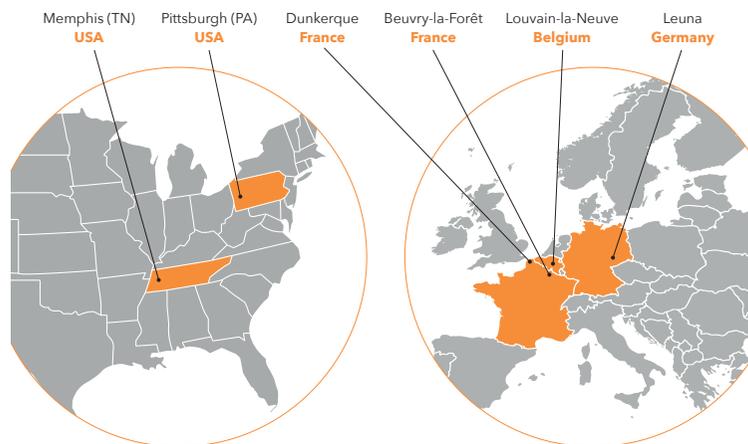


MINASOLVE® is an affiliate of MINAFIN® Group

Created in 2004, **The MINAFIN® Group**, specializes in fine chemistry for the life sciences and high tech industries. Activities include industrial subcontracting, development of chemical syntheses and industrial scale-up of custom-made processes as well as proprietary products with high added value for the pharmaceutical, cosmetics, agriculture and high-tech industries. Strong synergies exist between all business units: MINASOLVE, MINAKEM, MINAGRO, PENNAKEM, PRESSURE CHEMICALS, MINASCENT and EcoXtract.

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220
M€ SALES



888
EMPLOYEES



87
SCIENTISTS



6
PRODUCTION SITES

MINAFIN®
GROUP

2020.06. V3.2

Elage



SAFE AND STABLE
SKIN BRIGHTENER

- ✓ **Nature-derived & nature identical**
- ✓ **High purity ≥ 98%**
- ✓ **Skin radiance enhancer & spot correction**
- ✓ **INCI: Ellagic Acid**

MINASOLVE®
BIO-INGREDIENTS FOR YOUR APPLICATIONS

green solving attitude.

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Elage is a 100 % nature identical and nature-derived skin brightening agent

Elage is a **highly pure** grade of Ellagic Acid, a polyphenol naturally occurring in fruits, such as strawberries, raspberries, blackberries, pomegranates, walnuts and chestnuts.

Its main functions are :

- ▶ Making skin tones more vibrant and radiant
- ▶ Evens and balances skin tones
- ▶ Reduction of hyperpigmented spots
- ▶ Reduction of red spots

How does it work ?

Elage slows down or **inhibits the skin from over-producing melanin**. It **evens out the skin tone** and **reduces spots** caused by melanin-related hyper pigmentation. As a result, the **skin appears brighter and more uniform**.

Elage's skin brightening activity is based on **two different mechanisms**:

1. Inhibition of alpha-Tyrosinase, a key enzyme in the formation of the skin pigment Melanin.
2. Prevention of non-enzymatic oxidation reactions within the cascade of Melanin formation.

Elage is further known for a multitude of beneficial effects on skin, such as:

- ▶ **radical scavenging** and **inhibition of lipid peroxidation**
- ▶ **anti-inflammatory** and **analgesic** activity
- ▶ **anti-photoaging**, preventing collagen destruction and inflammation caused by UV-B

The given information is accurate to the best of our knowledge. Customers are advised to perform their own studies on the usefulness of any ingredient for a particular application. Any recommended usage information is only provided as indication, and should not be considered as recommendation to violate of any laws, patents, or official regulations dealing with manufacture, composition, local procedures, product design, or end usage.

In-vivo test for skin brightening effects

The performance of **Elage** was evaluated in a clinical in-vivo study on 11 female subjects, aged 18-50 years with phototype Fitzpatrick I-V. The tests were carried out at PhD Trials, Lisbon.

Elage was used at a **concentration of 0.5 %** in an O/W emulsion (**Table 1**). The product was applied at home **two times per day for 28 days**. During the entire test period, the product presented **very good skin acceptability**.

Two instrumental test methods were applied **before (D0)** and **after (D28)** the treatment with a **Minolta chromameter CR-400** and high resolution photos with a **VISIA-CA system**.

Results

- ▶ A depigmentation effect was observed in 81.8% of all subjects
- ▶ The total number of visible spots was significantly reduced
- ▶ The resulting skin tone was significantly more even and vibrant
- ▶ The overall radiance of the skin was visibly enhanced

Visible spot reduction



Table 1: O/W-cream used for the in-vivo evaluation of Elage, pH 5.5

Phase	Raw material	INCI name	%
A	Water	<i>Aqua</i>	ad 100
	Xanthan Gum PC ⁽¹⁾	<i>Xanthan Gum</i>	0.50
B	Emulgade PL 68/50 ⁽²⁾	<i>Cetearyl Glucoside (and) Cetearyl Alcohol</i>	5.00
	Shea Butter ⁽³⁾	<i>Butyrospermum Parkii Butter</i>	3.00
	Sesame Oil ⁽³⁾	<i>Sesamum Indicum (Sesame) Oil</i>	3.00
	Hazelnut Oil ⁽⁴⁾	<i>Corylus Avellana (Hazel) Nut Oil</i>	3.00
C	Phenoxyethanol	<i>Phenoxyethanol</i>	1.00
	α-Tocopherol	<i>Tocopherol</i>	0.10
D	Elage ⁽⁵⁾	Ellagic Acid	0.50
	L-Lysine	<i>Lysine</i>	0.50
	Ascorbic Acid	<i>Ascorbic Acid</i>	0.05
	Water	<i>Aqua</i>	20.00
	Plantacare 1200 UP ⁽²⁾	<i>Lauryl Glucoside</i>	5.00
E	Citric Acid solution	<i>Aqua (and) Citric acid</i>	qs

Raw material suppliers: ⁽¹⁾ Jungbunzlauer ⁽²⁾ BASF ⁽³⁾ Caesar & Loretz ⁽⁴⁾ SanaBio ⁽⁵⁾ Minasolve

Application in cosmetic formulations

Elage is generally compatible with all common cosmetic ingredients. At pH > 6 it can lead to a yellow coloration, due to the formation of a coloured salt. **Elage** will not dissolve under neutral conditions, which has no negative impact on its activity. Like any common pigment, **Elage** is formulated in cosmetics under a **dispersed state**. The ingredient is preferably added to aqueous phases. Pre-mixing with **wetting agents** may help to ensure a uniform dispersion. **High shear mixing** is recommended.

The addition of **PEG-8 (4-6%)** helps to disperse **Elage** in water phase.

The addition of TiO₂ helps to get a lighter coloured cream.

Since **Elage** is lowering the levels of protective melanin inside the skin, it is recommended to formulate it in combination with broad spectrum UV-filtering sunscreen.



face care



skin care



make-up