

## Elage is a 100 % nature identical and nature-derived skin lightening agent.

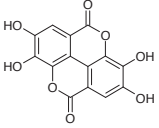
### Main Functions

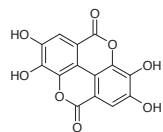
- ▶ Lightening of the skin tone
- ▶ Balancing of the skin tone
- ▶ Reduction of hyperpigmented spots
- ▶ Reduction of red spots

### Applications

- ▶ Skin Care / Face Care
- ▶ Sun Care
- ▶ Make up / Concealers

## Specifications and Characteristics

INCI	Ellagic Acid
CAS REG. N°	476-66-4
APPEARANCE	Light beige or light yellow powder
PURITY	≥ 99.0 %
RECOMMENDED PH OF USE	3.0 ▶ 5.5
RECOMMENDED USE LEVEL	0.1 ▶ 1.0%
REGULATORY STATUS	Globally approved
ORIGIN	<b>100 % nature-derived</b>
CHEMICAL STRUCTURE	



## Visible spot reduction D0/D28



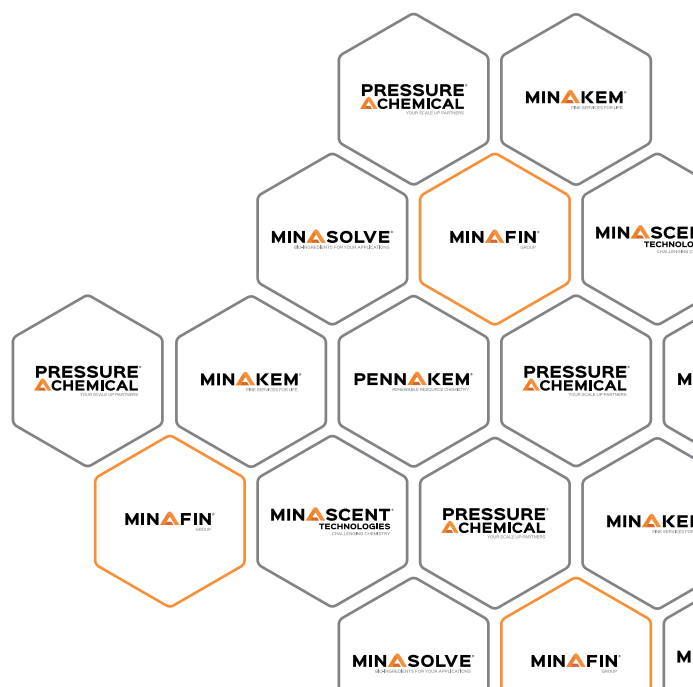
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- ▶ Minakem®
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- ▶ Improving our chemistry and operational excellence today
- ▶ Creating and innovating for tomorrow
- ▶ Driving our enterprises together to **go beyond expectations**



# Elage

## SAFE AND STABLE SKIN LIGHTENER



- ✓ **Nature-derived & nature identical**
- ✓ **High purity ≥ 99%**
- ✓ **Skin radiance enhanced & spot removal**
- ✓ **INCI: Ellagic Acid**

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## Self-assessment

after 28 days of application at 0.5% use-level



## 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 **TiO<sub>2</sub>** helps to get a white cream (4% recommended).

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.

## Guidance formulation

### Radiance Serum

Phase	Raw Material	INCI name	%
A	Emulgade 165 <sup>(2)</sup>	Glyceryl Stearate (and) PEG-100 Stearate	3,00
	Lanette O <sup>(2)</sup>	Cetearyl Alcohol	1,50
	Cetiol C5 <sup>(2)</sup>	Coco-Caprylate	2,00
	Myritol 318 <sup>(2)</sup>	Caprylic/Capric Triglycerides	4,00
	Massocare Sil DM 350 <sup>(3)</sup>	Dimethicone	1,20
B	Bioxan SFT50 <sup>(3)</sup>	Helianthus Annuus Seed Oil (and) Tocopherol	0,30
	Glycerin 99,5% <sup>(2)</sup>	Glycerin	3,00
C	Xanthan Gum Mesh 80 <sup>(3)</sup>	Xanthan Gum	0,20
	Eau déminéralisée	Aqua (Water)	Qsp
	<b>Elage</b> <sup>(1)</sup>	<b>Ellagic Acid</b>	<b>0,50</b>
D	Polyglycol 400 <sup>(3)</sup>	PEG-8	4,00
	Salicylic Acid	Salicylic Acid	0,50
D	<b>Fresh'in Green+</b> <sup>(1)</sup>	Pentylene Glycol (and) Methyl Diisopropyl Propionamide	<b>0,30</b>
E	<b>E-Leen Green B</b> <sup>(1)</sup>	Pentylene Glycol (and) Aqua (Water) (and) Sodium Benzoate (and) Benzoic Acid	<b>3,00</b>

### Manufacturing process

- Mix all ingredients from Phase A and heat at 75°C.
- Prepare Phase B and Phase C separately.
- Mix Phase B and Phase C and Heat at 75°C.
- Mix Phase B and Phase C at Rotor Stator for 2 minutes, then add Phase A.
- Emulsify and decrease T°C under mixing.
- Add Phase D then Phase E under mixing.

### Properties, stability and microbiology

**Aspect:** Off white fluid emulsion

**pH:** 4.5 – 5.0

Stable 4 weeks room T°C, 4°C, 45°C.

Meets Criteria A / ISO 11930

### Raw materials suppliers

<sup>(1)</sup> Minasolve

<sup>(2)</sup> BASF

<sup>(3)</sup> Quimica Masso

## Guidance formulation

### Brightening Cream

Phase	Raw Material	INCI name	%
A	Emulgade 165 <sup>(2)</sup>	Glyceryl Stearate (and) PEG-100 Stearate	6,00
	Lanette O <sup>(2)</sup>	Cetearyl Alcohol	3,00
	Cetiol C5 <sup>(2)</sup>	Coco-Caprylate	5,00
	Myritol 318 <sup>(2)</sup>	Caprylic/Capric Triglycerides	3,00
	Massocare Sil DM 350 <sup>(3)</sup>	Dimethicone	1,20
B	Uvinul A + B (2)	Ethylhexyl Methoxycinnamate (and) Diethylamino Hydroxybenzoyl Hexyl Benzoate	10,00
	Bioxan SFT50 (3)	Helianthus Annuus Seed Oil (and) Tocopherol	0,30
B	Glycerin 99,5% <sup>(2)</sup>	Glycerin	2,00
	Xanthan Gum Mesh 80 <sup>(3)</sup>	Xanthan Gum	0,30
	Eau déminéralisée	Aqua (Water)	Qsp
C	<b>Elage</b> <sup>(1)</sup>	<b>Ellagic Acid</b>	<b>0,50</b>
	Polyglycol 400 <sup>(3)</sup>	PEG-8	4,00
	Citric Acid	Citric Acid	0,05
D	<b>E-Leen Green B</b> <sup>(1)</sup>	Pentylene Glycol (and) Aqua (Water) (and) Sodium Benzoate (and) Benzoic Acid	<b>3,00</b>

### Manufacturing process

- Mix all ingredients from Phase A and heat at 75°C.
- Prepare Phase B and Phase C separately.
- Mix Phase B and Phase C and Heat at 75°C.
- Mix Phase B and Phase C at Rotor Stator for 2 minutes, then add Phase A.
- Emulsify and decrease T°C under mixing.
- Add Phase D under mixing.

### Properties, stability and microbiology

**Aspect:** Off white viscous emulsion

**pH:** 5.0 – 5.5

Stable 4 weeks room T°C, 4°C, 45°C.

Meets Criteria A / ISO 11930

### Raw materials suppliers

<sup>(1)</sup> Minasolve

<sup>(2)</sup> BASF

<sup>(3)</sup> Quimica Masso

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.