

PHYTOMARINE AEGIS

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90147-46-9, 6920-22-5.

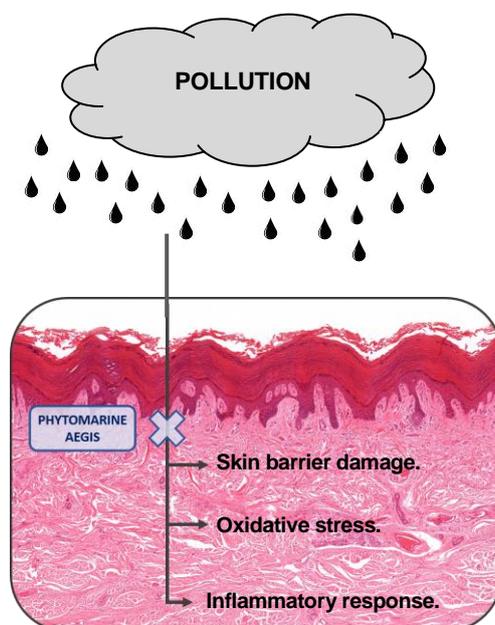
INCI: Aqua, Butylene Glycol,
Glycosaminoglicans, Xanthium Strumarium
Fruit Extract, 1-2-Hexanediol.

EINECS Nº: 231-791-2, 203-529-7, 305-682-6,
290-438-0, 230-029-6.

INTRODUCTION

Pollution has become a global and alarming problem that seems to have no end and produces serious effects on our skin.

The polluting particles (PM), composed of organic chemical acids and heavy metals, penetrate the skin by diffusion activating certain metabolic responses that have different negative effects:



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PROPERTIES

PHYTOMARINE AEGIS is a product created from the combination of bioactive ingredients that come together to produce an **antipollution effect**. Provides hydration and reduce skin inflammation, protecting and repairing the skin.

PHYTOMARINE AEGIS is a double-action active ingredient:

- *Xanthium Strumarium*: Herbaceous plant native to North America and allochthonous in Europe and Asia. It repairs the epidermal barrier by inhibiting the proinflammatory mediators released due to the contact of our skin with polluting substances.
- *Medusa*: The product incorporates the jellyfish body bioactives, which has a mucin (protein responsible for the hydration of the animal) with three times more hydrating and hygroscopic activity than hyaluronic acid. It provides hydration, reduces cell damage and creates an improvement in the binding of keratinocytes to provide greater protection of the skin.

ACTION:

Pollutant particles (PM) can trigger inflammatory reactions by direct interactions with the intracellular molecule Aryl hydrocarbon receptor (AhR) in keratinocytes. Polluting particles can also be a cause of allergic immune responses in the dermis, which is a common symptom in atopic dermatitis.

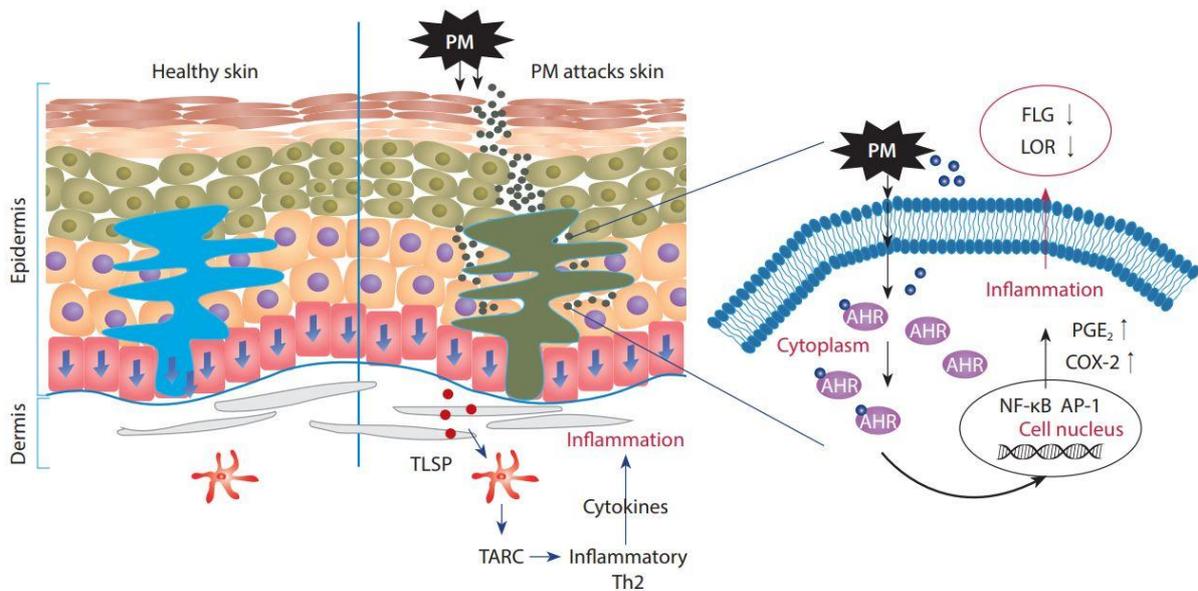
Inflammatory reactions in the epidermis and the immune response in the dermis release several cytokines and modifies the expression of the essential components of the skin barrier, such as filaggrin (FLG) and loricrin (LOR) in keratinocytes.



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To counteract the effects of pollution and also improve the appearance of the skin, **PHYTOMARINE AEGIS** has the following properties:

- **Anti-inflammatory:** Inhibits the neurotransmission of the processes that cause inflammation reducing the cutaneous sensitivity. It blocks the synthesis of the proteins Interleukin-1 α (IL-1 α), Nerve Growth Factor (NGF) and Interleukin-6 (IL-6) to avoid the cascade of signals to produce the inflammatory reaction. There are studies of the decrease in the expression of the aryl hydrocarbon receptors (AhR) or other mediators of the inflammatory response such as prostaglandin E2 (PGE2) or cyclooxygenase 2 (COX-2).
- **Epidermal barrier improvement:** promotes the synthesis of protein structures that link cells from one tissue to another. The increase in the expression of some of these structures, such as filaggrin (FG) or loricine (LOR), has been quantified by in vitro tests. These links are important to avoid the appearance of cutaneous alterations.
- **Moisturizing action:** The mucin from the jellyfish provides three times more hydrating and hygroscopic activity than hyaluronic acid. This property has been checked with an in vivo assay of transepidermal water loss.
- **Reinforcement cell cohesion:** increases cell viability and association to provide greater protection. This effect can be seen with the interaction of the active with a culture of HEKa cells.



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ESPECIFICATIONS

Appearance	Transparent Liquid
Color	Light Brown – Dark Brown
pH	5.5 – 6.5
Specific Gravity (25°C)	0.984 – 1.024
Refraction Value	1.342 – 1.352
Solubility	Soluble in aqueous solutions
Microbiology	Aerobic bacteria < 100 ufc/g Yeast and moulds < 10 ufc/g

DOSAGE

Recommended dose between 0.5 - 5%.

ADDITIONAL DATA	
USE PRECAUTIONS	Available on Material Safety Data Sheet
STORAGE	Store in a tightly closed container at room temperature, away from direct light and moisture.

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