

# ITALINE™ P

EMBRACING OUR **HEALTHY**  
**MEDITERRANEAN SKIN DIET**  
WE DISCOVER THE **ROMAN TUSCIA** TO DEVELOP  
A NUTRIENT-RICH **POMEGRANATE ACTIVE**  
FOR **SCALP WELLNESS**

ITALINE™ P is a "MICROBIOME-FRIENDLY" and **SUSTAINABLE** Active.

**EFFICACY** studies (*in vitro* and clinically tested) proves the increase in INVOLUCRIN (skin barrier integrity), the decrease of INTERLEUKIN 8 (anti-inflammatory effect), REDNESS, SEBUM, TEWL, DESQUAMATION, ERYTHEMA, BURNING and ITCHING reduction in the scalp.



# THE INSPIRATION

Due to the diversity of the **Mediterranean Climate** that allows our **Italian agriculture** to have tremendous sources, Akott has created a unique brand-new concept for its **ITALINE™ LINE**:  
the **Healthy Mediterranean Skin Diet**  
that influences the selection of unique sources such as **nutrient-rich Wonderful Pomegranate** cultivated in **Roman Tuscia**

## ITALIAN "SECRET" LAND

**Roman Tuscia** is situated in Northern Lazio and its charm relies on medieval villages such as "the dying city" **Civita di Bagnoregio** and enchanting places like the **Park of monsters** in **Bomarzo**.



Civita di Bagnoregio - ITALY



Park of monsters, Bomarzo - ITALY



## FOOD INSPIRATION

Tuscia's **culinary heritage** relies on folkloric festivals dedicated to food deliciousness and local products such as Roman pecorino cheese, the golden hazelnut, and **risotto with pomegranate seeds**.



## LOCAL AGRICULTURE

The Etruscans revolutionized ancient **irrigation methods** in Tuscia, evolving local agriculture. Nowadays, Tuscia stands out for its excellence thanks to the advancements in **organic farming techniques** and its **volcanic soil** for which is called the "**land of water and fire**" due to the ancient volcanoes and the lava that shaped many lakes in the area.



## THE HEALTHY MEDITERRANEAN POMEGRANATE

The combination of fertile volcanic soil and the optimal **Mediterranean climate** allows Tuscia to grow an exquisite **Wonderful** variety of pomegranates.

**Pomegranate** is a magical fruit since ancient Roman times, that symbolizes **life**, and **abundance**, tied to the myth of Venus, the goddess of love.

Akott has selected the **Pomegranate** to launch

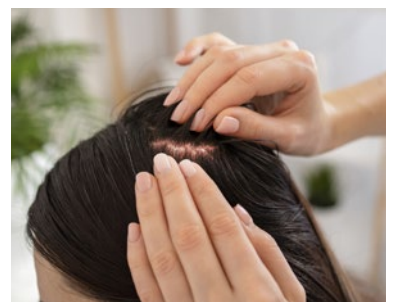
## ITALINE™ P

for its interesting source of phytochemicals, high nutritional value, and potential beneficial effects on health such as antioxidant, dermo-protective, antiproliferative, anti-angiogenesis and cardio-protective activities.

**ITALINE™ P** integrates the biologically active compounds of pomegranate into the perfect product for the **Skinification trend**

The **Skinification trend** emphasizes treating the scalp with the same dedication as facial skincare, using ingredients effective for skincare to create special products to **nourish, exfoliate and hydrate** the scalp.

Akott launches the perfect **SCALP WELLNESS ROUTINE** with **ITALINE™ P** just as the skincare routine does for the face.



# THE CONCEPT

Inspired by the **HEALTHY MEDITERRANEAN SKIN DIET** Akott has developed

## ITALINE™ P

the **MICROBIOME-FRIENDLY** and **SUSTAINABLE** Active leverages the beneficial properties of upcycled Pomegranate for **SCALP WELLNESS**



### POMEGRANATE and its health benefits

Urban dust (UD) is a type of air pollution comprising fine particles of dust, soot, smoke, and other pollutants. Urban dust as well as radiations, chemicals, and metabolic processes lead to **oxidative stress**. One of the effects of free radicals is to induce **inflammation** and antioxidants can scavenge it, consequently reducing skin and scalp irritation.

Some of the beneficial substances found in **Pomegranate** are vitamins, minerals, proteins, **phenolic compounds** such as caffeic acid, ferulic acid, chlorogenic acid, coumaric acid, ellagic acid, fatty acids, **anthocyanins** and **ellagitannins** that include **GRANATIN B** and **PUNICALAGIN**.

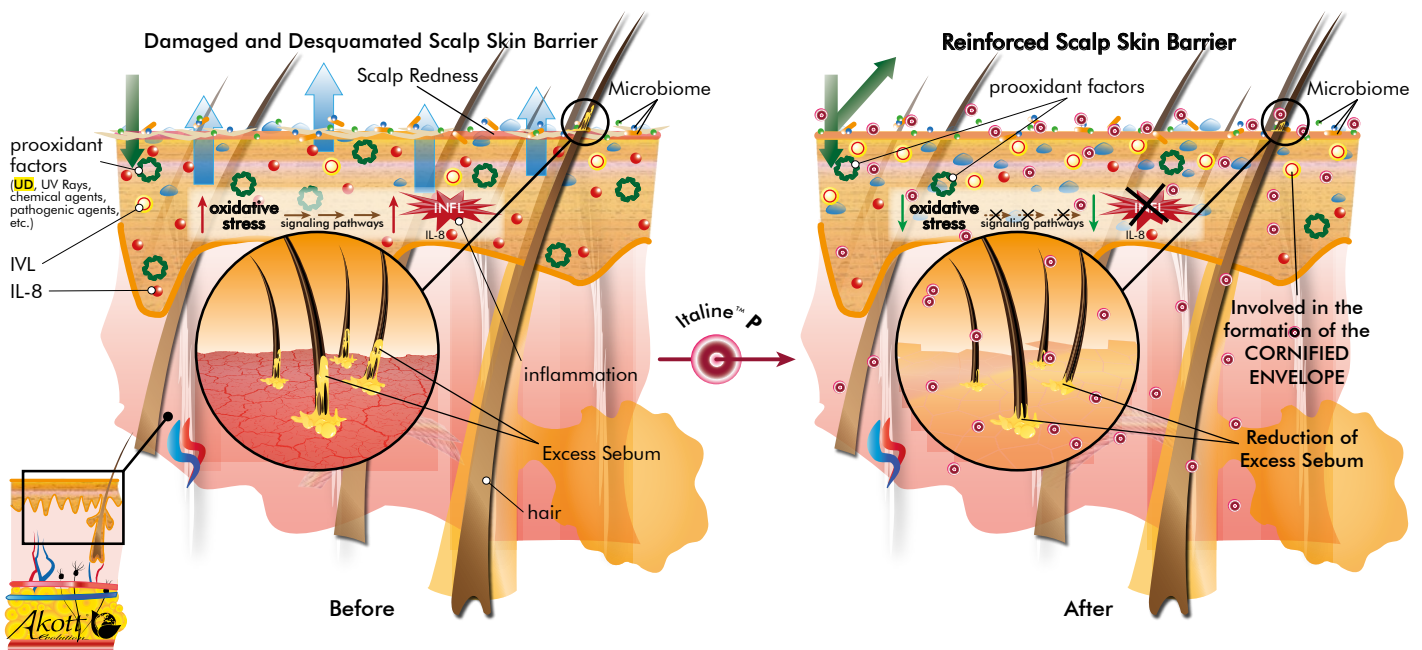
### SOURCE

**Italian Pomegranate Peel, Seed and Pulp**

### MECHANISM OF ACTION

**ITALINE™ P** reduces UD-induced IL-8 protein levels due to its anti-inflammatory capacity directly related to the antioxidant and free radical scavenger activity, thanks to ellagitannins characteristic of pomegranates such as **PUNICALAGIN** and **GRANATIN B**.

The increase of Involucrin protein level leads to an improvement of the cellular differentiation and therefore to an optimization of the scalp stratum corneum organization, protecting it from external agents.

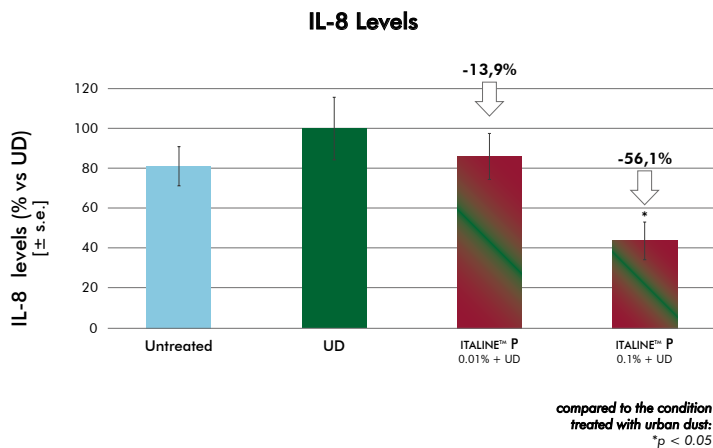


# EFFICACY EVALUATION

## LABORATORY STUDY (*in vitro*)

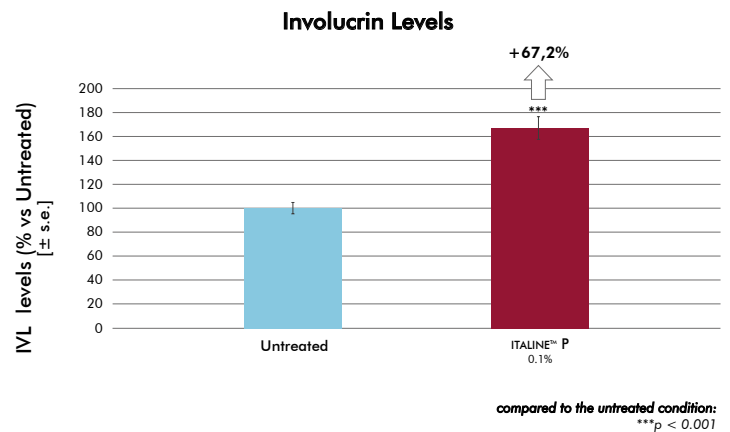
### ANTI-INFLAMMATORY EFFECT

Normal Human Epidermal Keratinocytes (NHEK) were cultured in the presence of Urban Dust (UD) and **ITALINE™ P** at 0.01% and 0.1% for 24h. IL-8 protein levels by a specific ELISA assay were quantified.



### SCALP BARRIER INTEGRITY

Normal Human Epidermal Keratinocytes (NHEK) were treated with **ITALINE™ P** at 0.1% for 72h. Involucrin (IVL) protein levels by a specific ELISA assay were quantified.



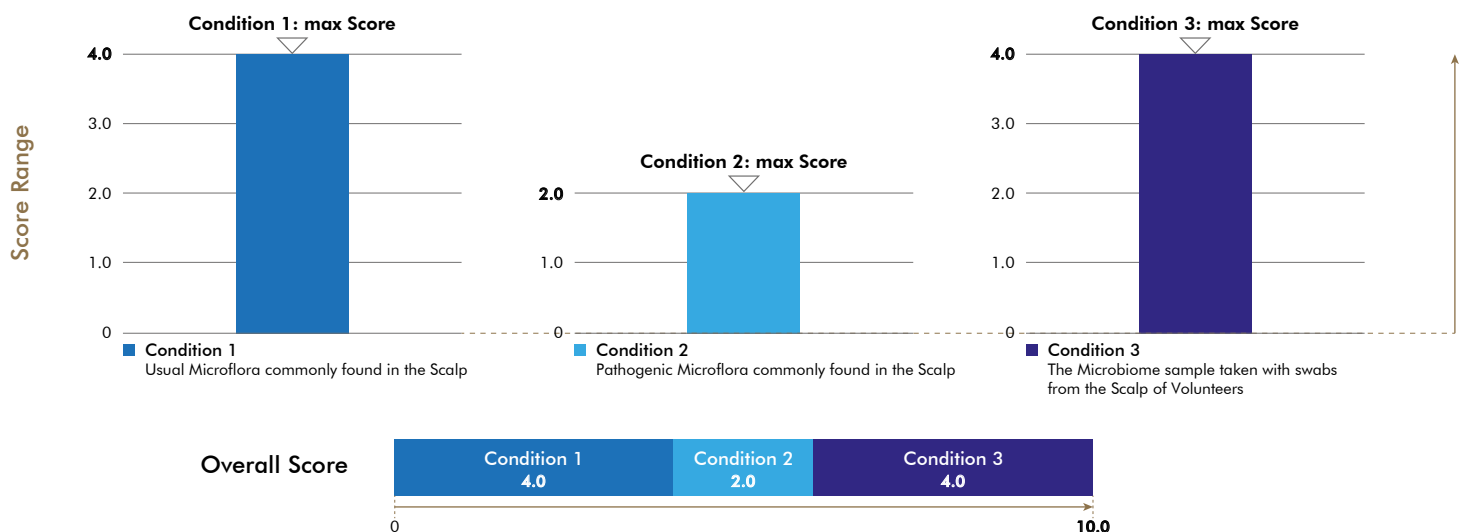
**ITALINE™ P** decreases the production of pro-inflammatory mediators (IL-8) induced by a source of **OXIDATIVE STRESS** such as **URBAN DUST**.

**ITALINE™ P** increases **INVOLUCRIN** levels, thus reinforcing the stratum corneum.

### MICROBIOME-FRIENDLY

The influence of **ITALINE™ P** on the scalp microbiome is evaluated with a prescribed inoculum of suitable microorganisms through 3 conditions. The score of each condition is calculated with a predefined algorithm. A total score of 5 or above 5 characterizes the product under test as "MICROBIOME-FRIENDLY".

#### Microbiome-Friendly Score Range



**ITALINE™ P** achieved an overall score of 10.0, therefore, it is characterized as "MICROBIOME-FRIENDLY".

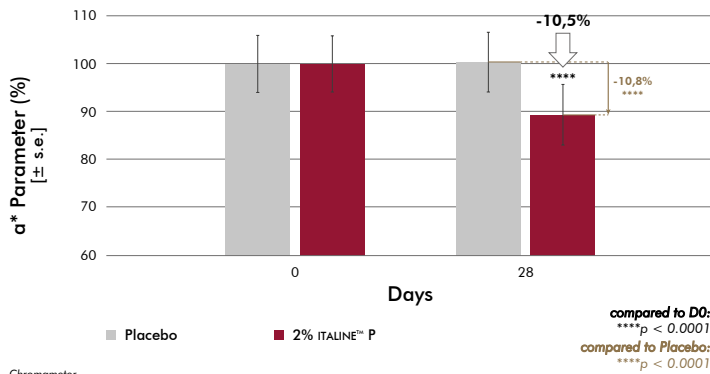
# EFFICACY EVALUATION

## CLINICAL STUDY

30 healthy volunteers aged 18-70 with sensitive and irritated scalp, itching and seborrhea on the scalp were divided into two groups. The first group applied once a day a scalp lotion containing **ITALINE™ P** at 2%, and the other one applied a placebo scalp lotion, for 28 days.

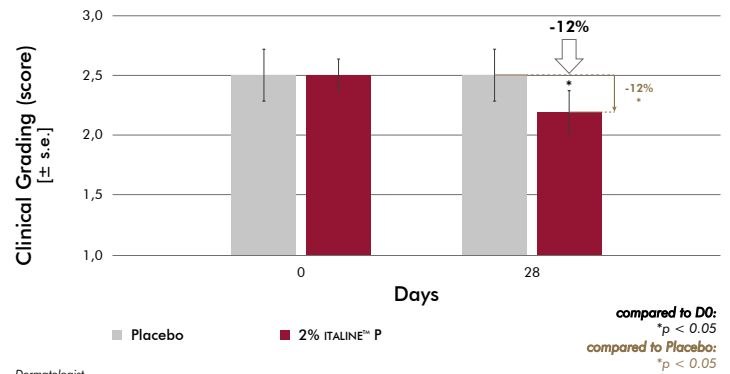
### ANTI-IRRITANT ACTIVITY

#### Scalp Redness (a\* value)



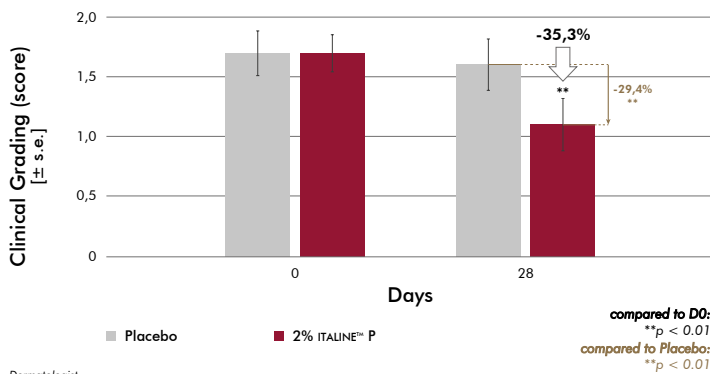
Chromameter

#### Scalp Erythema



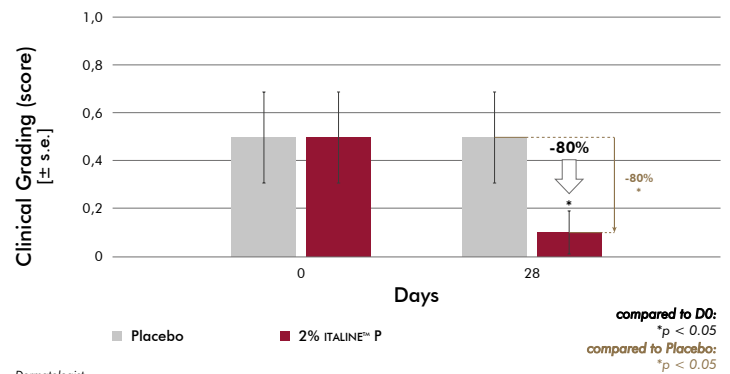
Dermatologist

#### Scalp Itching



Dermatologist

#### Scalp Burning



Dermatologist

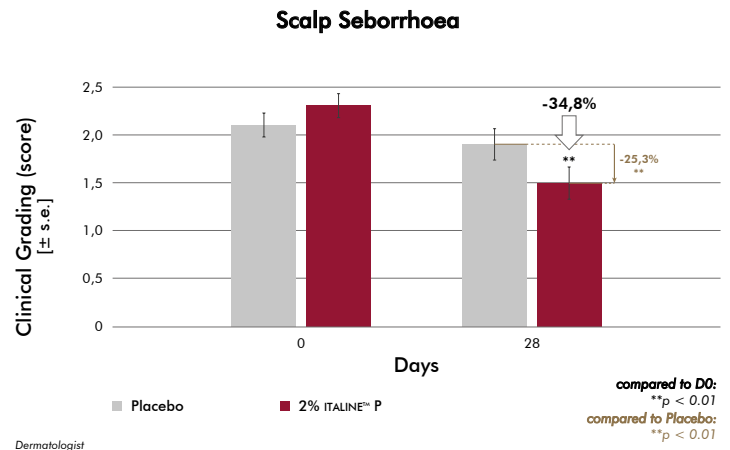
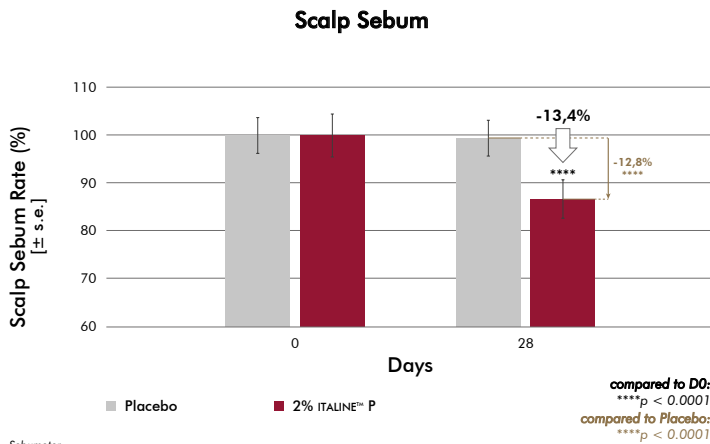


Visible Scalp Redness reduction on a 56-year-old female volunteer

**ITALINE™ P** at 2%  
has a **SOOTHING EFFECT**, acting on the reduction of **SCALP REDNESS**, **SCALP ITCHING** and **SCALP BURNING** after 28 days.

# EFFICACY EVALUATION

## SCALP SEBO-REGULATORY EFFECT



In medicine, *seborrhoea* is the pathological increase in sebaceous secretion that gives rise to various types of dermatoses. By "Scalp Seborrhoea" we mean the assessment of the non-pathological excess of sebum evaluated by a dermatologist.



Visible Scalp Sebum reduction on a 55-year-old female volunteer



Visible Scalp Sebum reduction on a 65-year-old male volunteer

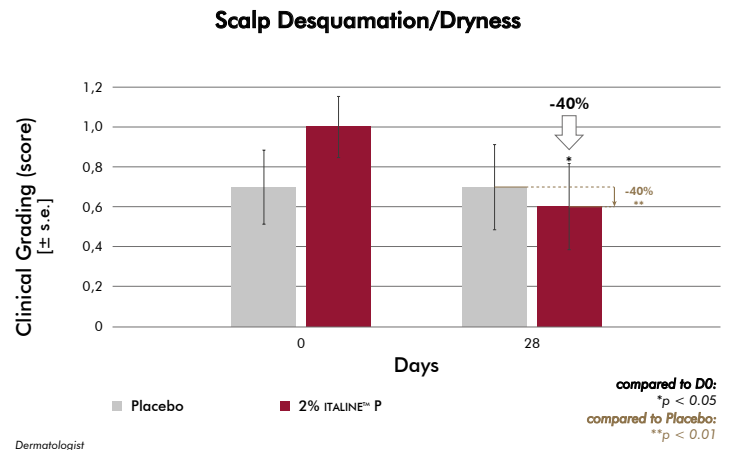
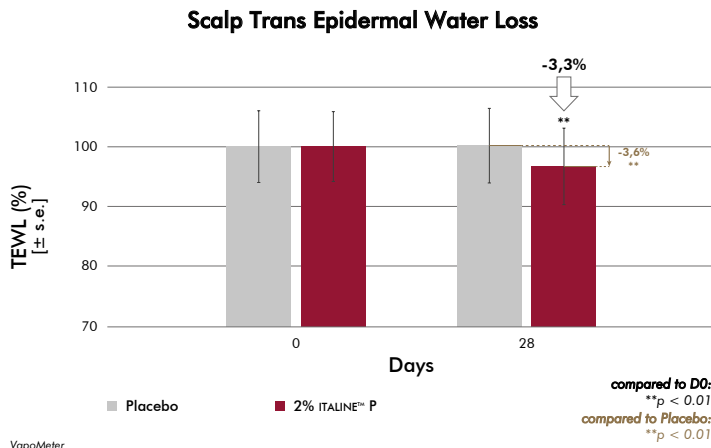
An excess of scalp sebum could induce an overproliferation of *Malassezia* that, in addition to leading to the appearance of dandruff, releases pro-inflammatory unsaturated fatty acids.

### ITALINE™ P at 2%

shows a reduction in **SCALP SEBUM PRODUCTION** both through instrumental and clinical evaluation, thus **PREVENTING IRRITATION** on subjects with seborrhea on the scalp.

# EFFICACY EVALUATION

## SCALP BARRIER INTEGRITY



### ITALINE™ P at 2%

**STRENGTHENS THE SCALP SKIN BARRIER**, acting on the improvement of **Trans Epidermal Water Loss** and consequently reducing **SCALP DESQUAMATION** after 28 days.

## Self-Evaluation

Do you think the product has a <b>Sebonormalizing Efficacy</b> ?	73,4% volunteers
Do you think the product is <b>gentle on the Scalp</b> ?	100% volunteers
Do you think the product <b>reduces Scalp Redness</b> ?	86,7% volunteers
Do you think the product <b>reduces the Itching sensation on the Scalp</b> ?	80% volunteers
Do you think the product <b>improves Desquamation/Dryness of the Scalp</b> ?	73,3% volunteers
Do you think the product <b>increases the Barrier function of the Scalp</b> ?	73,3% volunteers
Do you think the product has <b>Soothing effect on the Scalp</b> ?	86,7% volunteers
Do you think the product <b>improves the overall appearance of the Scalp</b> ?	86,6% volunteers
Do you think the product is <b>suitable for your Scalp type</b> ?	80% volunteers
Would you buy a cosmetic product containing an active ingredient that <b>cares for your Scalp as carefully as you care for the Skin on your face</b> ?	93,4% volunteers

## CONCLUSIONS

*In vitro* testing shows an increase in **INVOLUCRIN** synthesis, a structural component of the **CORNIFIED ENVELOPE** that leads to an increase in barrier integrity, whilst this **MICROBIOME-FRIENDLY** Active shows its **ANTI-INFLAMMATORY** effect.

The clinical studies confirm the capacity of **ITALINE™ P** to act on **SCALP BARRIER INTEGRITY** and to have **ANTI-IRRITANT ACTIVITY**.

Moreover, it shows a **REDUCTION OF SEBUM** production in dry scalps with oily hair.

# PRODUCT INFORMATION

**INCI name:** Propanediol, Punica granatum Bark/Fruit Extract, Aqua (Water)

**CAS number:** 504-63-2 / 84961-57-9 / 7732-18-5

**EINECS number:** 207-997-3 / 284-646-0 / 231-791-2

**REGULATORY:** EU, USA, China, Japan

**APPEARANCE:** Limpid liquid from yellow to light orange

**SOLUBILITY:** Hydrosoluble

**USE:** Recommended dosage is 1-2%

**FORMULATION TIPS:** The product is liquid and easy to use. Recommended pH range is 3-8.

**SAFETY DATA:** ITALINE™ P has been tested for cytotoxicity™ and skin tolerance on sensitive skin and has demonstrated a good safety profile

**PRESERVATIVES:** free

**ECO-SUSTAINABLE SOLUTION:** As consumers become more aware of the environmental impact of their choices and activities, they are more likely to seek sustainable solutions. In this context, ITALINE™ P comes from upcycled material, indeed pomegranate peels, seeds and pulp are by-products of juice production. Additionally, it is certified ISO 14067 by providing a CFP value.

**COSMOS:** Compliant

**HALAL:** Compliant

**VEGAN:** Friendly



## COSMETIC PROPERTIES

REDUCTION OF PRO-INFLAMMATORY MEDIATORS RELEASE,  
OPTIMIZATION OF THE STRATUM CORNEUM ORGANIZATION,  
SCALP REDNESS REDUCTION,  
SCALP IRRITATION RELIEF,  
SCALP INTEGRITY IMPROVEMENT,  
SEBUM-BALANCING,  
SCALP MICROBIOME-FRIENDLY

## APPLICATIONS

SCALP WELLNESS PRODUCTS,  
SENSITIVE SCALP CARE PRODUCTS,  
IRRITATED SCALP CARE PRODUCTS,  
ANTI-REDNESS SCALP PRODUCTS,  
SCALP INTEGRITY PRODUCTS,  
ANTI-POLLUTION/ANTIOXIDANT SCALP CARE,  
DANDRUFF PREVENTION,  
OILY HAIR, HAIR CARE, SCALP CARE



Made in Italy

**AKOTT EVOLUTION S.r.l.**

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