A NATURAL FORCE FOR VITAL HEALTH

This material is intended for professionals only.
Pomanox® is an all-natural standardised pomegranate fruit extract (Punica granatum L.) cultivated in Mediterranean regions of Spain through sustainable farming and extracted with an eco-friendly proprietary technology: the Pure-Hydro Process™.¹

Pomanox® full-spectrum pomegranate polyphenols are standardised to a naturally high punicalagin content (up to 30%).

Pomanox® provides evidence-based healthy ageing benefits¹⁻⁶ and has now been shown to be potentially beneficial for skin and hair health too.⁷,¹⁴

A PRELIMINARY IN-VITRO ASSESSMENT FOUND POMANOX® MAY HAVE COSMECEUTICAL PROPERTIES¹⁴

A CLINICAL STUDY FOUND THE FOOD SUPPLEMENT FORM OF POMANOX® SUPPORTS HAIR CARE AND HAIR GROWTH⁷

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The skin is one of the largest organs of the human body. Human skin consists of two main layers:
- Epidermis
- Dermis

Skin ageing is the result of complex biochemical processes and does not occur due to the passage of time alone, but also due to exposure to different environmental factors.

Intracellular and extracellular oxidative stress initiated by reactive oxygen species (ROS) plays an important role in skin ageing, which is characterised by wrinkles and atypical pigmentation resulting from increased melanin production.

In general, wrinkles are created by alterations of the dermal matrix due to the reduction of collagen, elastic fibres and hyaluronic acid.

By using in vitro models, Pomanox® effects were evaluated through 3 assays measuring:
- Tyrosinase inhibitory activity
- Modulatory effects on collagen and hyaluronic acid metabolism
- Effects in Hs68 cells exposed to UV radiation
An increase in melanin production (hyperpigmentation) can occur in the normal process of melanogenesis, triggered by factors such as ageing and sun exposure, and result in darkened skin patches (age spots or sun spots) that make the skin look uneven.

Tyrosinase is a multifunctional enzyme that catalyses the initial rate-limiting step of melanin formation, and inhibition of this enzyme is one of the most promising means of reducing melanogenesis and, therefore, modulating skin hyperpigmentation.¹²

Pomanox® may reduce hyperpigmentation by reducing melanin synthesis*. An in vitro model demonstrated its inhibitory activity on tyrosinase, comparable to a standard used to compare enzyme inhibitory activity, thiazolidine, and slightly lower than kojic acid (IC₅₀ 0.15 mg/ml) (Figure 1).⁷,¹²

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.
Skin ageing is the result of complex biochemical processes, including collagen and elastin degradation in the epidermal and dermal layers.  

Hyaluronan is a glycosaminoglycan (GAG) that is ubiquitously present in the extracellular matrix of all vertebrates and it is important for maintaining skin hydration.

Tests were performed with human fibroblast Hs68 cell lines in order to evaluate collagen and hyaluronic acid metabolism.

Pomanox® modulated in vitro collagen metabolism, leading to a dose-dependent increase in its presence in the extracellular matrix (Figure 2).

Pomanox® increased hyaluronic acid levels in the extracellular matrix (Figure 3).

Pomanox® produced a significant increase of pro-collagen I and hyaluronic acid in cell fractions at concentrations of 20, 40 and 80 µg/ml. Pro-collagen I is a precursor for collagen synthesis, and an increase would result in more collagen being available in the extracellular matrix.

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ASSAY 3: UV RADIATION EXPOSURE

IN VITRO EVALUATION OF THE COSMECEUTICAL EFFECTS OF POMANOX®

The preventive and regenerative effects of Pomanox® on several parameters associated with skin photo-ageing caused by UV radiation were evaluated in assays in the Hs68 cell line.⁷

• In the preventive assay, cells were treated with three doses of Pomanox® (low, medium and high) for 24 hours prior to exposure to UV-B radiation.
  - The results suggest that preventive treatment with Pomanox® can positively modulate both collagen and hyaluronic acid metabolism and can exert a significant protective effect on UV-induced oxidative damage (Figure 4).*

• In the regenerative assay, cells were exposed to UV-B light and then treated with the three doses of Pomanox® for 24 hours.
  - The results suggest that Pomanox® can revert UV-induced oxidative damage and can regenerate hyaluronic acid metabolism (Figure 5).*

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0.15 - 0.10 - 0.05 - 0.00 -
POM20-UV POM40-UV POM80-UV
0 - 20 - 40 - 60 -
POM20-UV POM40-UV POM80-UV

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HAIR GROWTH RATE
EFFICACY AND SAFETY OF TWO HAIR HEALTH INTERVENTIONS WITH POMANOX®

• **Aim:** Efficacy and tolerability of hair health interventions with Pomanox®

• **Study design:** Pilot, randomised, longitudinal: 20 men (mean age of 47 years) with age-related hair loss, randomised to Pomanox® capsules (N = 10) and Pomanox® hair lotion (N = 10), evaluated at days 0, 30 and 60.

• **TREATMENT 1:** Food supplement with 220 mg of punicalagins (2 × 380 mg Pomanox® P30 capsule/day).

• **TREATMENT 2:** Topical hair lotion with 2.5% Pomanox® P30 (4 ml/day).

• **Primary objective:** Evaluation of hair regeneration by phototrichogram.

PHOTOTRICHOGRAM IS A TECHNIQUE TO CALCULATE HAIR DENSITY, NUMBER OF HAIRS IN TELOGEN AND ANAGEN PHASE, PERCENTAGE OF THIN HAIR AND HAIR GROWTH RATE. THIS TECHNIQUE USES DERMOSCOPY WITH POLARISED LIGHT TO MONITOR THE FOLLICLES AND BLOOD VESSELS

• **Secondary objectives:** Anti-hair loss capacity of the product (strength of the hair) (pull-test).

• **Results:** Both treatments significantly improved hair regeneration, which was more pronounced with capsules than with lotion.*

RESULTS: PHOTOTRICHOGRAM (FOOD SUPPLEMENT)

- **IMPROVED TEST SCORE IN THE PULL TEST**
- **INCREASED HAIR DENSITY AND THICKNESS**
- **INCREASED RATIO OF HAIR IN THE ANAGEN / TELOGEN PHASE (ANAGEN = GROWTH PHASE, TELOGEN = FALL PHASE)**
- **IMPROVED SPEED OF HAIR GROWTH**

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POMANOX®: PATENTED POMEGRANATE FRUIT EXTRACT (EP 1967079), STANDARDISED IN POLYPHENOLS PUNICALAGINS UP TO 30%. HEALTHY PROPERTIES INVESTIGATED IN PUBLISHED SCIENTIFIC STUDIES.

HIGHLIGHTS

- ECO-FRIENDLY, PROPRIETARY, OSMOTIZED WATER-ONLY EXTRACTION TECHNOLOGY
  - THE PURE-HYDRO PROCESS™ - PRESERVES AND CONCENTRATES THE NATURAL COMPOSITION AND THE BENEFITS OF POMEGRANATE FRUIT WITH 100% SOLUBILITY, SAFETY AND POTENCY.
- FROM LOCALLY GROWN AND PROCESSED SPANISH POMEGRANATES.
- AVAILABLE AS ORGANIC.
- SUPPORTED BY SEVERAL PUBLISHED SCIENTIFIC STUDIES.

References
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