

VIOQUA®

ANTI-AGEING AND WHITENING NUTRICOSMETIC INGREDIENT

- * Pomegranate extract rich in polyphenol
- * Powered by patented ADS® nanotechnology to increase bioavailability
- * Superior anti-oxidant activity compared to other super-fruits
- * Protects the dermal matrix by inhibition of elastase and collagenase
- * Increase skin hydration (+40%)
- * Reduce skin roughness (-31%)
- * Decrease depth and volume of wrinkles (-26%)
- * Inhibit inflammation and reduce dark spot



Nutricosmetic ingredient that whitens and rejuvenates the skin from within, VIQUA® is a Pomegranate extract titrated in punicalagin with superior bioavailability thanks to an innovative and patented delivery system ADS® nano-technology.

VIQUA®

- Effective: clinically proven anti-ageing and whitening effect
- Safe: entire plant extract to avoid side effects
- Low dosage: ADS® delivery system allows quick absorption of the actives to avoid their deterioration

Pomegranate anti-ageing benefits



The health benefits of Pomegranate have been extensively studied:

- Ellagic acid-rich pomegranate extract has inhibitory effect on tyrosinase activity and UV induced pigmentation (2005).
- Pomegranate polyphenols lower blood cholesterol and boost the body anti-oxidant system (2000).
- Pomegranate fractions promote proliferation and procollagen synthesis and inhibit matrix metalloproteinase-1 (2006).

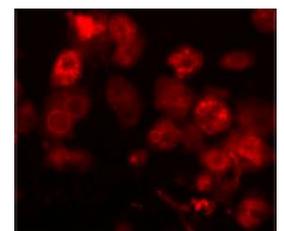
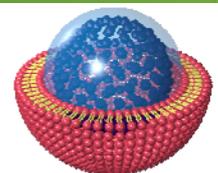
Therefore, pomegranate extract can be regarded as a potent anti-ageing active.

VIQUA® uses entire plant extract of Pomegranate to avoid side effects. VIQUA® is rich in the following nutrients: Vitamins B1, B2, C and Niacin, Potassium, Glutamic acid, Aspartic acid, Hydrolysable tannins punicalagins ellagitannins, Flavonoids, Ellagic acid, Pelletierines, psuedopelletierine, Isopelletierine, Methylisopelletierine, Genistein, Diadzein, Estrone. Using the entire plant extracts avoids undesired side effects.

ADS® encapsulation increases bioavailability

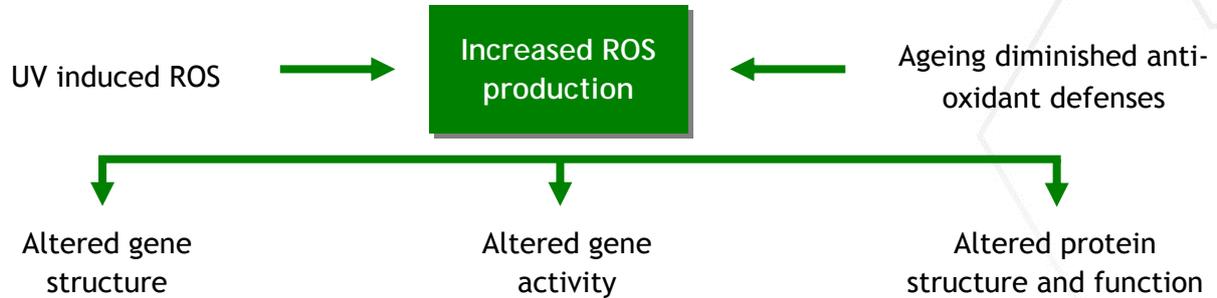
ADS® - Advanced Delivery System is a patented process of encapsulation that allows quick absorption of actives in order to avoid their deterioration (Patent pending: N° PCT/FR 04/01282). The technology is based on amino phospholipids coated to avoid destruction in the stomach.

- An in vitro study on human lipocytes has shown the ability of ADS® to enter the cell and to actively contribute to the cell anti-oxidant system (on the picture on the left, human adipocytes are cultured with VIQUA®, marked by fluorescence and stained in red. The electron microscopy reveals that ADS® powered VIQUA® has penetrated into the adypocytes membranes; further demonstrates an improved protective anti-oxidation effect in cell).
- An in vivo study has shown that encapsulated ingredients absorbed by oral route are transported by ADS® into the skin.



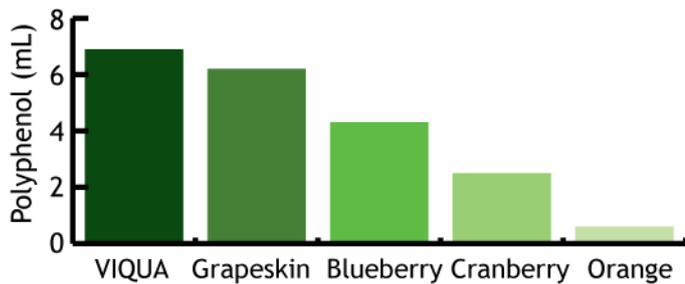
Anti-ageing mechanism (in vitro study)

According to specialists, the symptoms of aged skin result from damage by ROS (reactive oxygen species). VIQUA® powerful anti-oxidants protect from damage by ROS:

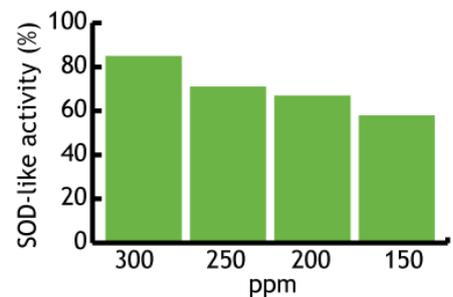


VIQUA® content in polyphenols is superior to other fruit extracts. As polyphenols are powerful anti-oxidants, this explains the strong SOD-like activity of VIQUA® even at low dosage.

Polyphenol content of super-fruits and VIQUA®

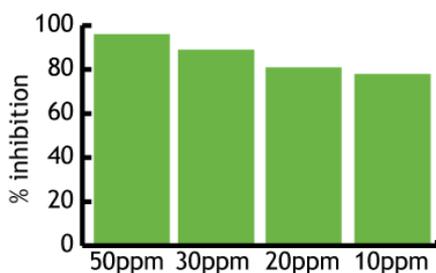


VIQUA® SOD-like activity

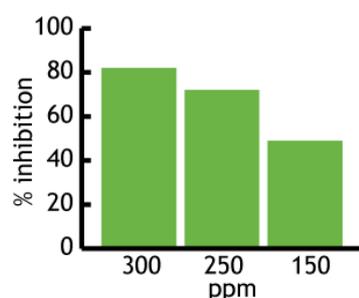


Collagenase and Elastase are enzymes that destroy the dermal matrix of the skin, resulting in the appearance of wrinkles. VIQUA® is a potent inhibitor of both collagenase and elastase at low concentration, helping to reduce the symptoms of ageing.

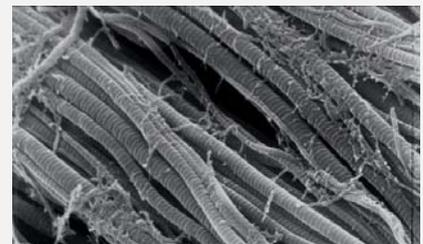
Elastase inhibition



Collagenase inhibition



Collagen and Elastin are macroproteins that form a matrix in the skin dermis. They are responsible for the skin shape and elasticity. Wrinkles result from the destruction of the dermal matrix by UV exposure and damage by ROS.



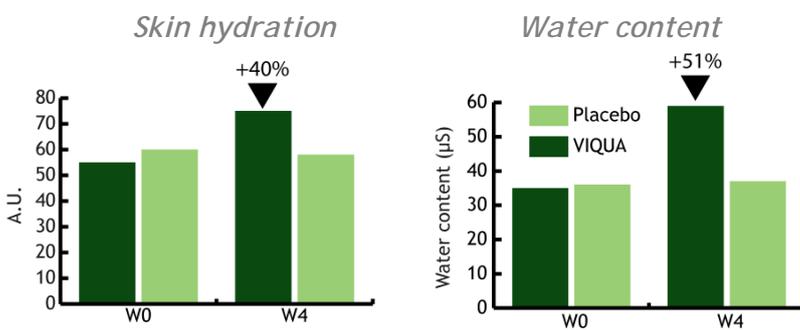
Powerful anti-ageing and whitening effect in vivo

VIQUA® efficacy was assessed in a placebo controlled double blind ingestion study:

- Dose: 250mg/day
- Duration: 4 weeks
- Volunteers: 30 female subjects between 30 and 55 years old
- Evaluated parameters: hydration, tonicity, inflammation, desquamation and elasticity of facial skin
- Instruments used: Corneometer CM 825 - Visioscan VC 98 - Skicon

■ Increasing skin hydration

Skin hydration improved significantly while placebo group showed no improvement.



Re-establish the natural healthy balance of the skin. Improve dry skin by boosting the health and strength of the layers of the skin so that it naturally keeps hydration locked in.



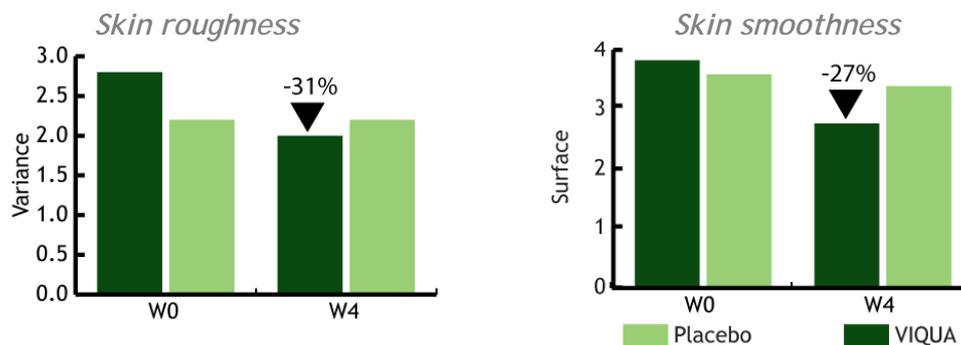
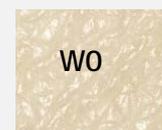
The water content of stratum corneum, measured by Skicon, has significantly increased only after treatment.

■ Smoothing skin surface

The skin roughness has significantly decreased only after the active treatment.

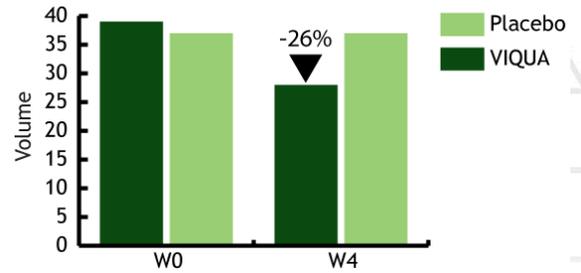
The surface is a parameter measured with Visioscan VC98, which calculates the size of the wavy skin surface, is an indirect measurement of skin smoothness. High smoothness will lead to decreased surface values. In this case, the surface has significantly decreased only after the active treatment. The skin smoothness has improved only after the active treatment.

The active treatment increased the health and strength of the dermis, epidermis and supporting structures, resulting in healthier, younger looking skin.



■ Reducing wrinkle depth

The volume parameter, measured with Visioscan VC98, is indicator for the depth of wrinkles. In this study, the volume has significantly decreased only with the active treatment.



■ Reduces dark spots and improves blood circulation

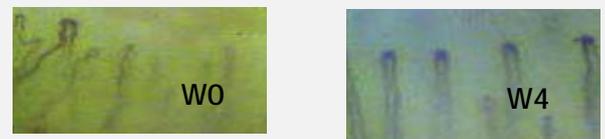
Source of inflammation, dark spots have disappeared only after the active treatment.

Skin inflammation has been significantly improved.



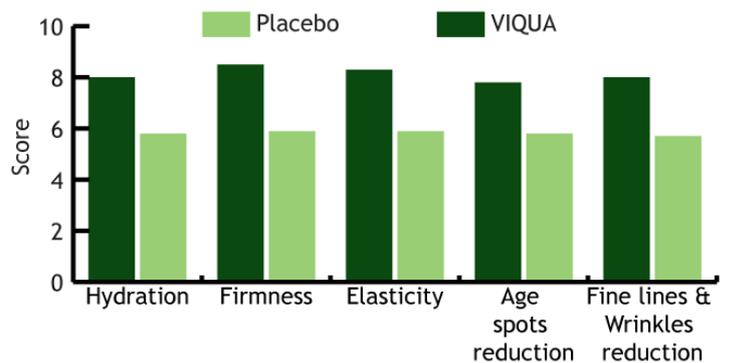
At W0 it was observed high permeability of blood vessels.

At W4 the permeability was significantly reduced and blood circulation increased.



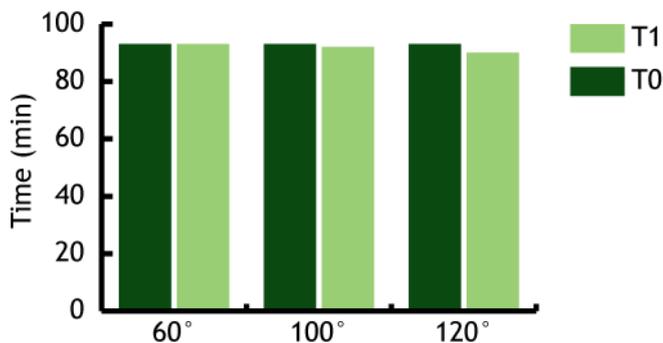
■ Consumer satisfaction

The self-assessment by volunteers shows evident perception's differences of all the estimated parameters that are correlated to the product's efficacy. The subjects assuming the active treatment have always expressed a higher score compared with the one's assuming the placebo.



Stable and Safe for Food Applications

The pyrolysis of VIQUA® does not occur at a normal food processing temperature for 60 minutes.



Mice administered with 300 or 2.000 mg/kg b.w. of VIQ-919 did not develop any clinical signs of toxicity either immediately or during post-treatment period. No mortality occurred in any of the treatment groups.

Following OECD guideline, the VIQ-919 should be classified by the Globally Harmonized System (GHS) as unclassified or very low toxicity substance (GHS 5).

APPLICATIONS

Powder: tablet, capsules, soft capsules, beverages, health food

IDENTIFICATION

Trade Name: VIQUA® PF
INCI: Punica granatum extract
CAS#: 84961-57-9
EINECS#: 284-664-0

DOSAGE

From 100mg (250 mg/day (clinical trial))

FORMULATION GUIDELINES

Temperature stability: yes
pH stability: yes
Literature Available: Overview / Presentation / Specifications / MSDS / COA

SPECIFICATIONS

Appearance: Powder
Colour: Light brown
Odour: Characteristic
Loss on drying: <6% (1 gr. 100°C 3hr.)
Tap density: 0.5 ~ 0.8 g/ml
Particle size: <500 µm
Heavy metals: Lead: <20 ppm / Arsenic: <3 ppm
Total germs aerobic: <10 000 c.f.u./g
Yeasts and moulds: <100 c.f.u./g
Pathogens: Absence
Pesticide / Herbicide: Absence

NUTRITIONAL DATA

Proteins: 1-1.5%
Carbohydrates: 60-65%
Fat: 0.05-0.1%
Energy value: 240-260 kcal/100g
Gluten free: Yes

TOXICOLOGY DATA

LD50 mouse: GHS classification: 5 / Unclassified
GMO free: Yes

HANDLING

Standard package: 25 kg
Shelf Life: 2 years
Storage: Store preferentially the product in full containers and hermetically sealed in well-ventilated areas preferably in obscurity, at ambient temperature.

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