

arganyl™



a modern
anti-ageing
active **INHIBITION of mmp**
OBTAINED **for an anti-ageing effect**
from an
ancestral tree flavonoids extracted from leaves of the argan tree

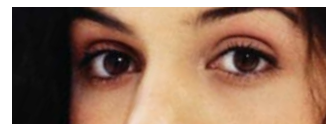
Inhibition of collagenase

Protection of collagen against destruction by MMP

Strengthening the cutaneous structure
for a smooth, firm skin



LABORATOIRES
SÉROBIOLOGIQUES
Division de Cognis France



ACTIVE INGREDIENT FOR SKIN CARE

DEFINITION

The argan tree (*Argania spinosa*) is a tree which grows only in the south of Morocco. It is particularly resistant to the difficult climatic conditions in this region and is the last barrier before the desert. The argan forest covers more than 800,000 ha and contains 20 million trees. It resembles an olive tree and produces small yellow fruits which become brown on ripening.

A precious oil extracted from the kernel of the fruit has been used by local populations for centuries for skin and hair care and for culinary applications.

Until now the leaves of the argan tree were not valorized. After identifying its constitutive flavonoids and demonstrating their considerable interest as a source of active ingredients for cosmetics, Laboratoires Sérobiologiques commenced a collaboration study with local competent organizations designed to identify the best conditions for harvesting these leaves.

This impact study gave rise to the production of a set of specifications including maintenance procedures for the argan forest which are necessary for its sustained exploitation, respecting the environment.

From these leaves, flavonoids have been isolated, purified and concentrated and give its activity to ARGANYL. Specific in vitro and ex vivo tests have demonstrated their excellent inhibitory activity on MMP and collagenase resulting in significant protection of macromolecules of the dermis, particularly collagen.

A use test for 2 months has clearly demonstrated the perceivable activity of Arganyl (face application).

ARGANYL is an original natural solution for preserving the skin against premature ageing.

EFFICACY TESTS

Ex vivo test: anti-collagenase activity

- Incubation of skin biopsies with collagenase, with and without Arganyl
- Observation of the collagen network destruction by the collagenase, and protective effect of Arganyl

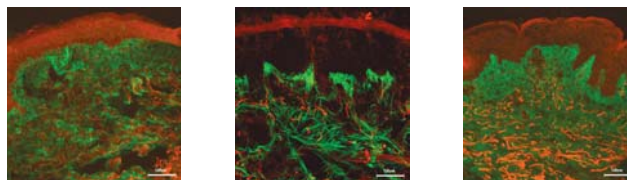
Consumer test:

Panel of 15 volunteers, 45 to 65 years old. Application on the face, twice a day for 8 weeks:

- Placebo cream on one side
- Cream with **3% Arganyl** on the other side

Evaluation of skin characteristics:

- **88% of the women feel their skin is more elastic**
- **71% have a smoother skin texture, pores are reduced**
- **100% of the volunteers feel the skin softer to the touch**



Control

Control +
collagenase

Control + collagenase
+ Arganyl (0,5%)

Conclusion

Arganyl clearly protects collagen network against collagenase destruction.

Further tests:

- **Anti-MMP-I activity: inhibition by 39% at 0.1%**
- **Anti-collagenase activity in tubo: IC 50 = 0.55%**
- **Anti-free radical activity: good protection against the major free radicals**

COSMETIC APPLICATIONS

- Anti-age face care
- Firming body care
- In association with slimming active ingredients in slimming care products
- In association with UV filters in anti-age sun products

TECHNICAL DATA

- INCI name: **Water (and) Glycerin (and) Argania Spinosa Leaf Extract**
- Dose of use: **1 - 3%**
- Aspect: **Limpid dark amber colored liquid with a weak odor**
- Solubility: **Soluble in water; insoluble in oils**

ARGANYL is sold under license agreement with the University of Michigan USA allowing the free use in any type of cosmetic form including in association with sun filters.