

AKOSKY® APIUM

Akott®
Evolution 



«REGINA VIARUM»,
"VIA APPIA ANTICA",
THE MOST ANCIENT ROAD

FROM THE POWER OF
CELERY STEM CELLS
THE **MAJESTIC ACTIVE**
INSPIRED BY
ANCIENT ROME

THE CONCEPT

AKOSKY® APIUM takes the name by the **Appian way** (Latin and Italian: **Via Appia**), which is the first and most important of the great roads built by the Ancient Romans, known also as "**Regina Viarum**" (**Queen of the Streets**), due to be the major building projects in the Ancient world.

In the Ancient Rome **Celery (Apium in Latin)** was considered "**Romans' magical potion**" because of its precious ingredients which include: vitamin A, vitamins B1, B2, B3, B5, B6, folate, vitamin C and vitamin K, essential minerals such as boron, calcium, chlorine, iron, magnesium, manganese, phosphorous, potassium, selenium, sodium, sulphur and zinc and several amino acids.

Inspired by the ancient knowledge of the power of this magical plant, Akott introduces AKOSKY® APIUM, an innovative product developed by using a cutting-edge technology.

AKOSKY® APIUM is obtained from **Apium Graveolens stem cells**, that is rich in phenolic acids, flavonoids and peptides. The plant cell culture is optimized to stimulate the production of healthy polyphenols and secondary metabolites.

ORIGIN

Fresh Organic Celery Plant Cells concentrate

ECO SUSTAINABLE SOLUTION

The extract is produced in the laboratory under controlled conditions, avoiding plant depletion from the environment.

EFFICACY

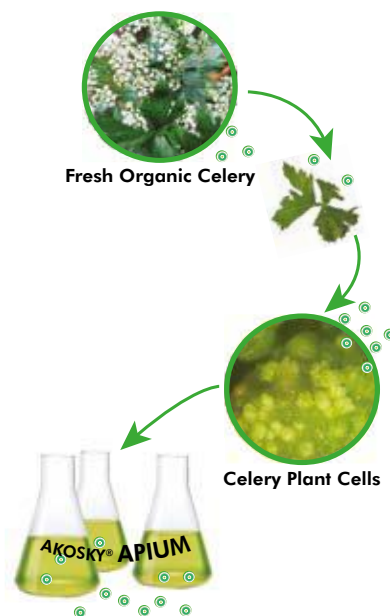
In vitro testing shows increased production of Collagen, Fibronectin and SPARC proteins to rebuild skin architecture.

FACE EFFICACY: ANTI WRINKLES AND SKIN REDENSIFIER

Clinical studies show visible wrinkles reduction and increase of skin thickness and density.

BODY EFFICACY: ANTI STRETCH MARKS

Clinical studies show improvement of skin smoothness, as confirmed by evaluation of skin texture in stretch marks.



RESULTS

LABORATORY STUDY (*in vitro*)

EFFICACY	TEST	RESULTS*
Antioxidant activity	ORAC	150 µmol TE/g
	Polyphenol content	4.2 mg GAE/g
Collagen induction ³	Collagen I (ELISA)	+34,09%
	Collagen III (ELISA)	+23,34%
Collagen protection ¹	Matrix metalloprotease 1 (RT-PCR)	-14,77%
	Matrix metalloprotease 3 (RT-PCR)	-16,22%
	Matrix metalloprotease 9 (RT-PCR)	-28,58%
Collagen assembly ²	SPARC (Secreted protein acidic and rich in cysteine) (RT-PCR) - Vital for collagen binding	+23,39%
Tissue Repairing ²	Cellular Growth (Scratch assay)	+18,81%
	Fibronectin (ELISA)	+30,91%
Hydration ¹	Aquaporin 3 (RT-PCR)	+36,81%
	β-glucocerebrosidase (RT-PCR) - Necessary for ceramide formation	+45,22%
	Hyaluronic Acid Synthase 3 (RT-PCR)	+47,79%
	Filaggrin (RT-PCR)	+21,60%
DNA protection ¹	DNA degradation (Comet assay)	-21,51%

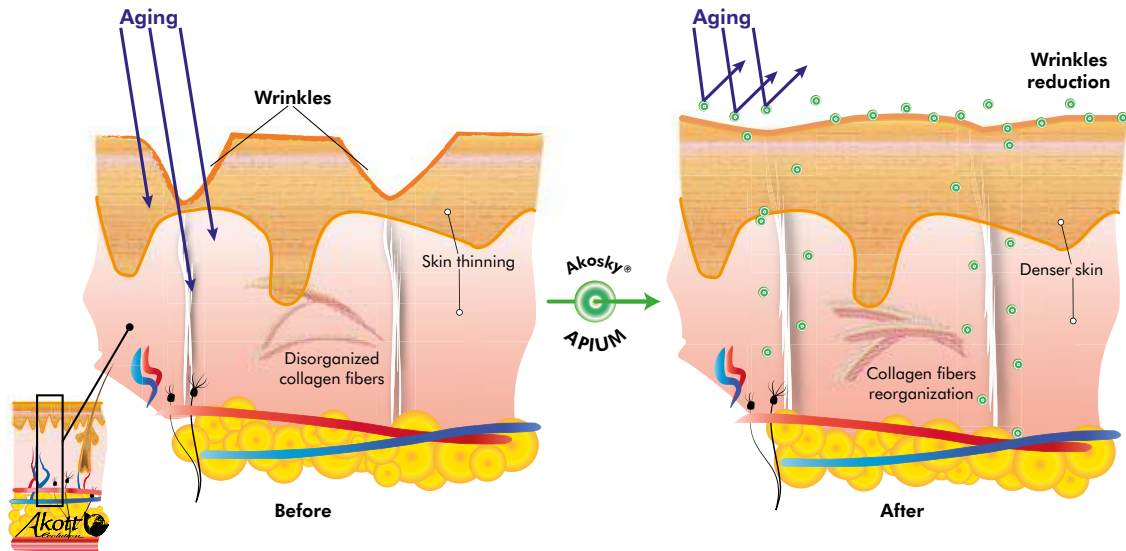
Study was run on Human Keratinocytes (HaCat)⁽¹⁾, Human Dermal Fibroblasts (HDF)⁽²⁾ and Murine Fibroblasts (NIH 3t3)⁽³⁾ *all data significant compared to control

Face Efficacy Evaluation

ANTI WRINKLES AND SKIN REDENSIFIER

MECHANISM OF ACTION

Polyphenols and secondary metabolites stimulate skin regeneration and rejuvenation.



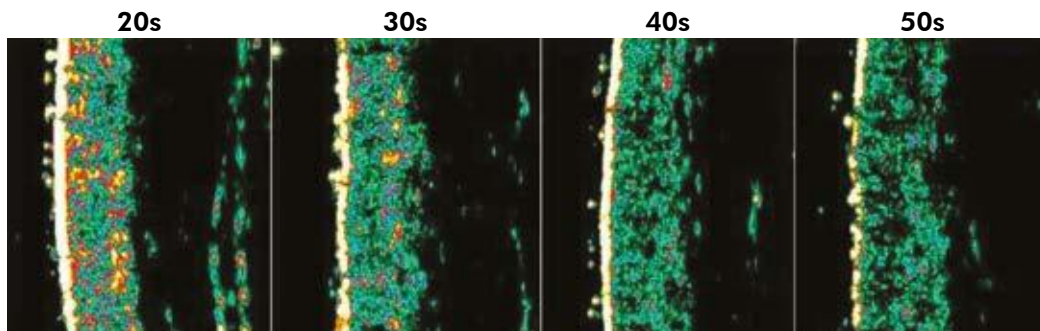
RESULTS

CLINICAL STUDY

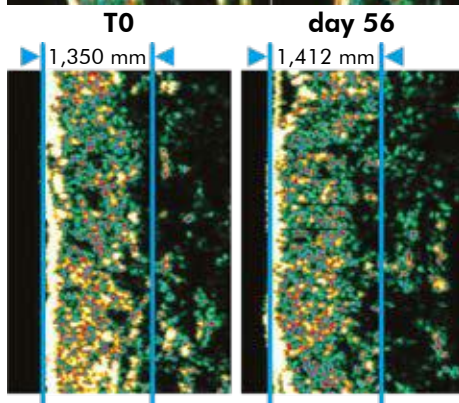
20 volunteers, both male and female (age 25-60 years old, average 39) applied once a day a face cream containing AKOSKY® APIUM at 2% on half face and a placebo formulation on the other half, for 2 months.

SKIN BECOMES 10 YEARS YOUNGER

High frequency ultrasound images show skin sections with information on dermal density. Pro-collagen and pro-elastin appear as green pixels (Medium Echogenic Pixels or MEP), whereas assembled mature collagen and elastin appear as red, yellow and white pixels (High Echogenic Pixels or HEP). A skin density value can be instrumentally obtained by measuring the amount of MEP + HEP, while a skin thickness value can be instrumentally obtained by measuring the area in which MEP + HEP are more than 90%.



Examples of skin ultrasound images of the cheek of non-treated volunteers of different ages

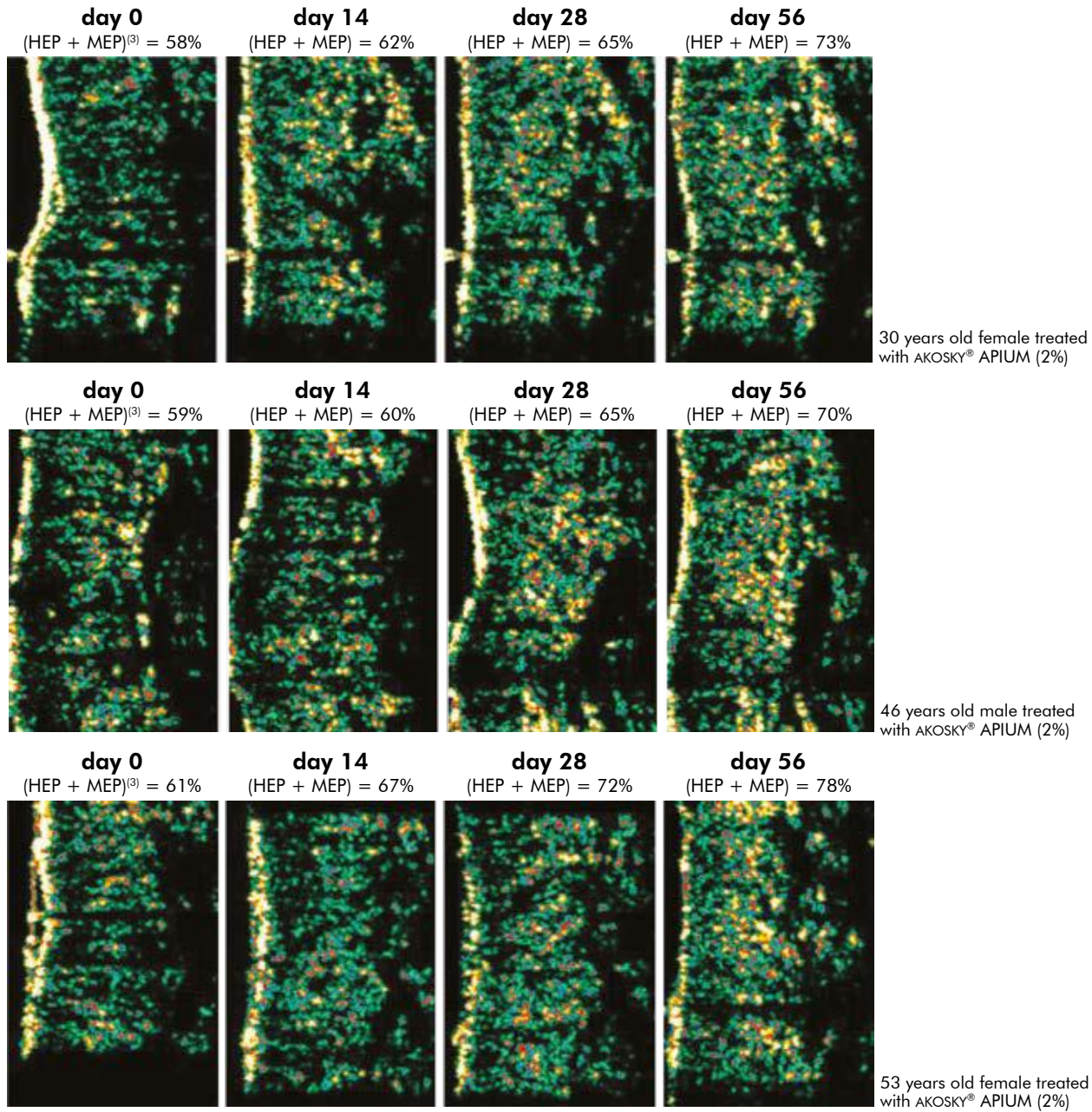


29 years old treated with AKOSKY® APIUM (2%)
MEP+HEP ≥ 90%

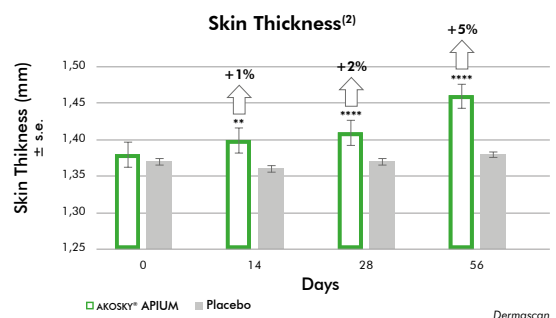
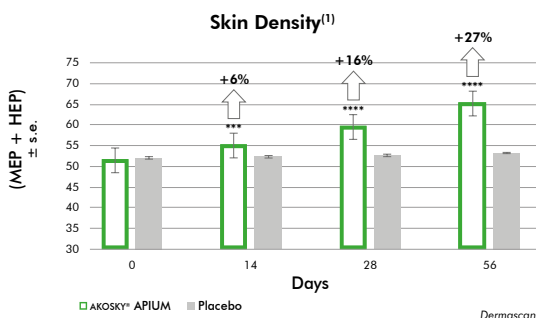


Face Efficacy Evaluation

Skin ultrasound images of volunteers treated with a face cream containing AKOSKY® APIUM at 2% were taken at day 0, 14, 28, 56.



Skin ultrasound images show a visible improvement of dermal density and thickness, along with an increase in mature collagen fibers. Images of a 53 years old volunteer after only 1 month of treatment can be compared with a 10 years younger subject.

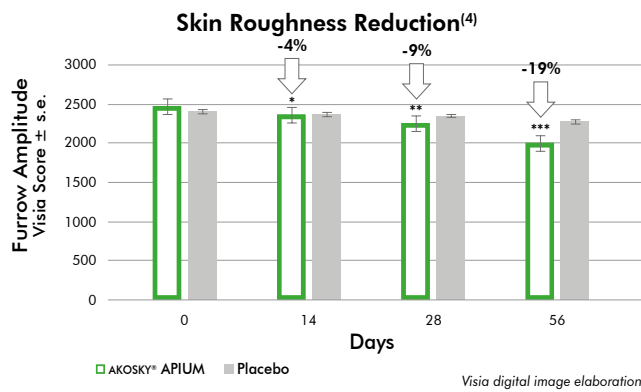
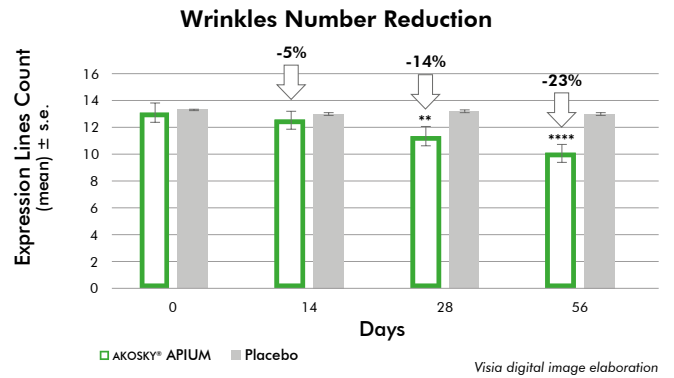
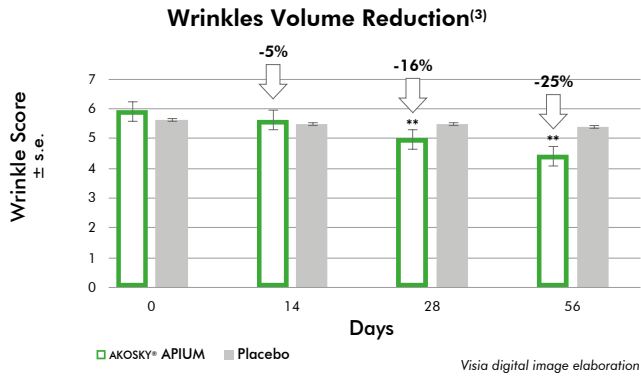


⁽¹⁾ MEP (Medium Echogenic Pixels): green pixels related to pro-collagen and pro-elastin;
 HEP (High Echogenic Pixels): red-yellow-white pixels related to mature collagen and elastin
⁽²⁾ Skin thickness (mm) express the area for which MEP + HEP ≥ 90%

*p ≤ 0,05, **p ≤ 0,01, ***p ≤ 0,001, ****p ≤ 0,0001 compared to Placebo

Face Efficacy Evaluation

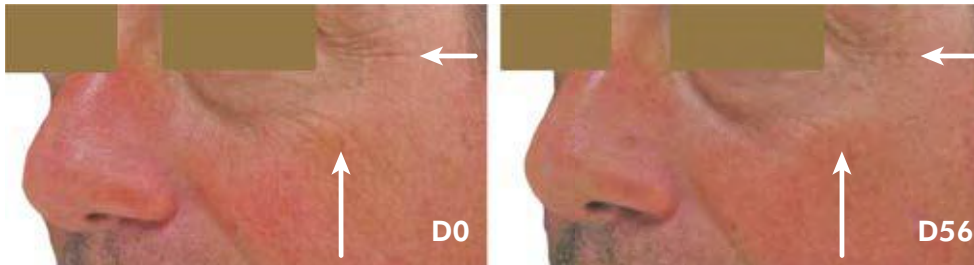
WRINKLES ARE VISIBLY REDUCED



⁽³⁾ The wrinkle score is related to the wrinkle volume (mm² x AU) = height (mm) x width (mm) x depth (AU) of the wrinkle

⁽⁴⁾ The roughness parameter calculates the maximal amplitude between the height of a peak and the depth of a furrow

*p ≤ 0,05, **p ≤ 0,01, ***p ≤ 0,001, ****p ≤ 0,0001 compared to Placebo



Wrinkle reduction on the cheek and on the eye contour in a 51 years old male volunteer



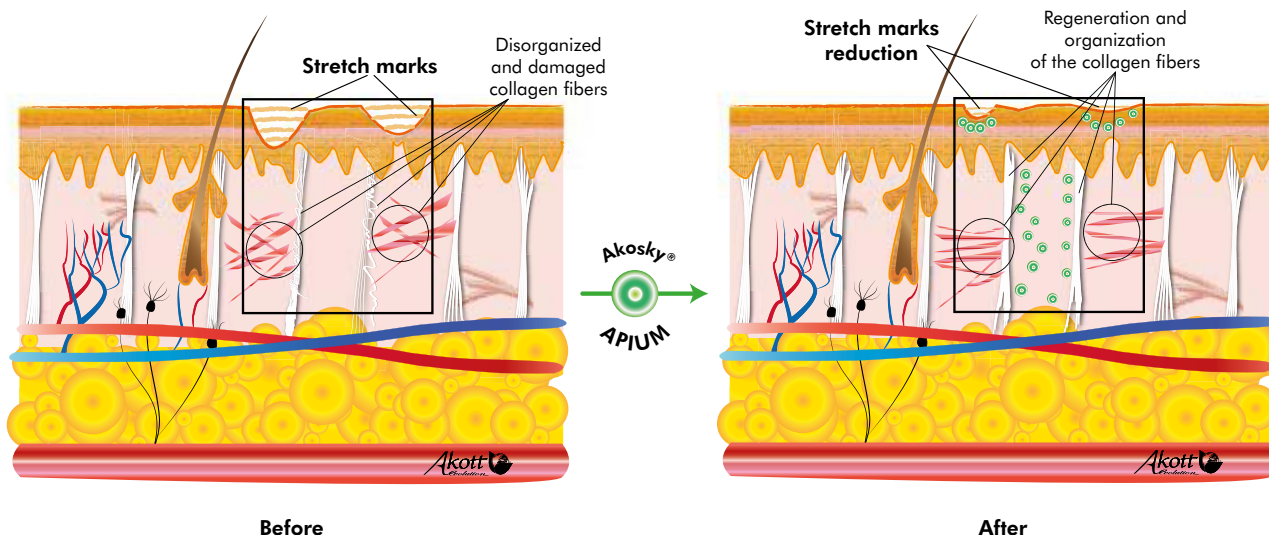
Undereye wrinkle reduction on a 60 years old female volunteer



ANTI STRETCH MARKS

MECHANISM OF ACTION

Polyphenols and secondary metabolites stimulate skin regeneration and repair.

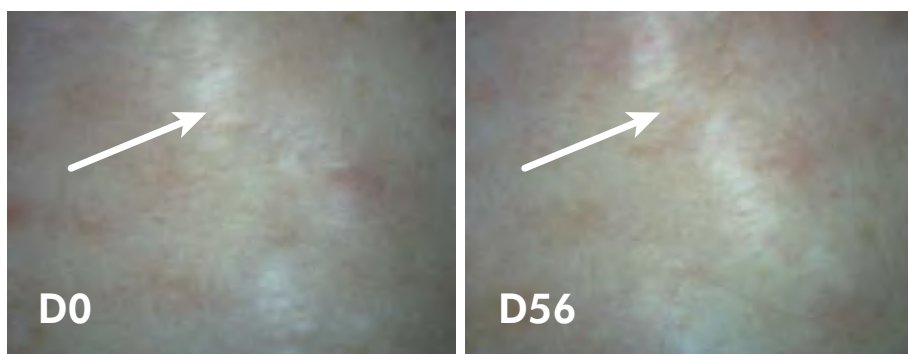
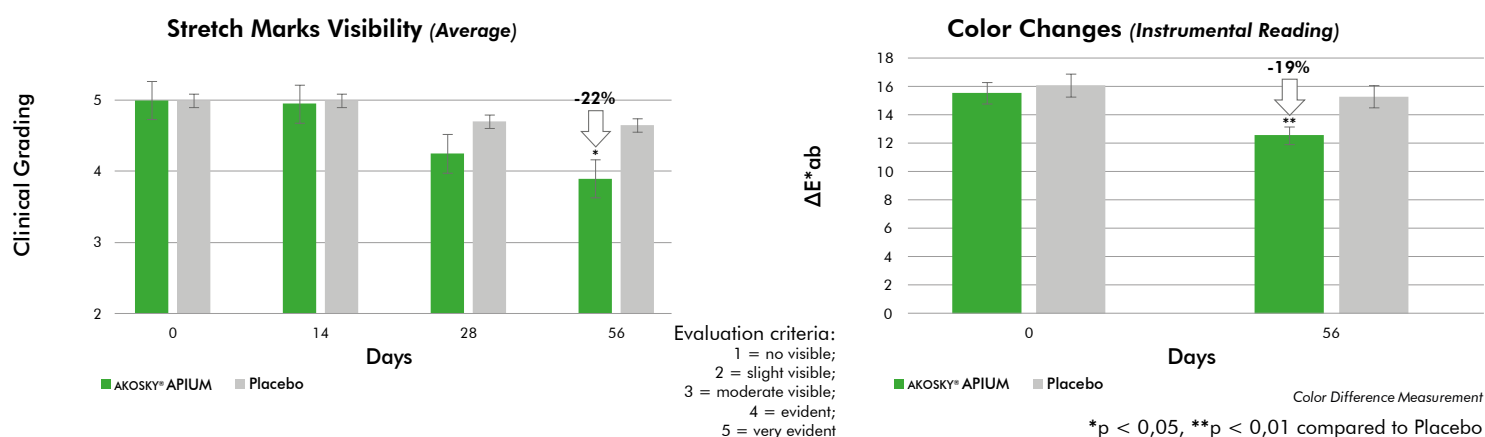


RESULTS

CLINICAL STUDY

40 female panelists (age 18-50 years old) with stretch marks (on either abdomen, thighs, buttocks, breast) were divided into two groups of equal number. The first group applied a body cream containing AKOSKY® APIUM at 2%, the other one applied a placebo formulation for 2 months.

STRETCH MARKS ARE VISIBLY REDUCED



Self-Evaluation

Skin Softness	95% volunteers
Skin Smoothness	90% volunteers
Skin Compactness	90% volunteers
Stretch Mark Visibility Reduction	80% volunteers
Stretch Marks Color Reduction	70% volunteers
Stretch Marks Size Reduction	80% volunteers

CLINICALLY TESTED FORMULATIONS

FACE PRODUCT

ANTI-AGING CREAM

PHASE	INGREDIENT	%
A	Cetearyl Alcohol, Sorbitan Stearate, Sodium Lauroyl Lactylate, Caprylic/Capric Triglyceride, Hydrogenated Lecithin	4,5
	Cetearyl Alcohol	3,8
	Hydrogenated Castor Oil	1,9
	Octyldodecyl Myristate	4,6
	Ethylhexyl Palmitate	4,5
	Dicaprylyl Ether	2,8
	Octyldodecyl citrate crosspolymer	1,5
B	Aqua (Water)	69,6
	Glycerin	2,8
C	AKOSKY® APIUM	2,0
D	Potassium Sorbate	0,5
	Sodium Benzoate	0,5
	Phytic acid	0,1
E	Polyacrylamide, C13-14 Isoparaffin, Laureth-7	0,9

BODY PRODUCT

ANTI-STRETCH MARKS CREAM

PHASE	INGREDIENT	%
A	Aqua (Water)	81,1
	Glycerin	2,0
	Phytic Acid	0,1
	®AKOLL TX (Caesalpinia Spinosa Gum, Xanthan Gum)	0,3
B	Cetearyl Alcohol, Sorbitan Stearate, Sodium Lauroyl Lactylate, Caprylic/Capric Triglyceride, Hydrogenated Lecithin	5,0
	Caprylic/Capric Triglyceride	3,0
	Amygdalus Dulcis (Sweet Almond) Oil	3,0
	COSMOSURF CE 150 (Stearyl/Octyldodecyl Citrate Crosspolymer)	2,0
	Cetearyl Alcohol	0,5
C	AKOSKY® APIUM	2,0
D	Phenoxyethanol, Ethylhexyl Glycerin	1,0

AKOSKY® APIUM

is the **BRONZE AWARD WINNER**
in the **Green Ingredient Award**
of the **In-Cosmetics 2014**



PRODUCT INFORMATION

INCI name: Glycerin, Aqua (Water), Apium Graveolens (Celery) Callus Extract

CAS number: 56-81-5, 7732-18-5, 89997-34-2

EINECS number: 200-289-5, 231-791-2, 289-667-9

REGULATORY: EU, USA, China*, Japan*

**INCI Glycerin, Aqua (Water), Apium Graveolens Extract*

APPEARANCE: Transparent yellowish viscous liquid

SOLUBILITY: Hydrosoluble

USE: Recommended dosage is 0.5% - 1.0%. For intensive treatment 2%

FORMULATION TIPS: The product is liquid and easy to use. Recommended pH range is 4 – 8.
Stable up to 70°C, to be added at the end of the formulation

SAFETY DATA: AKOSKY® APIUM has been tested for skin tolerance and has demonstrated a very good safety profile

COSMOS: Approved

HALAL: Compliant

VEGAN: Friendly



**COSMOS
APPROVED**

COSMETIC PROPERTIES

STIMULATES EXTRACELLULAR MATRIX, PROTECTS SKIN'S DNA,
PROMOTES COLLAGEN ASSEMBLY

Face

REDENSIFIES THE SKIN, INCREASES SKIN THICKNESS,
REDUCES WRINKLE APPEARANCE

Body

STIMULATES THE HEALING PROCESSES,
REDUCES STRETCH MARKS AND IMPROVES SKIN'S SMOOTHNESS

APPLICATIONS

Face Products

ANTI-AGE
SKIN REDENSIFIER
ANTI-WRINKLE
POST-ACNE

Body Products

ANTI-STRETCH MARKS
FIRMING PRODUCTS
POST-SCARS
BODY SILHOUETTE



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