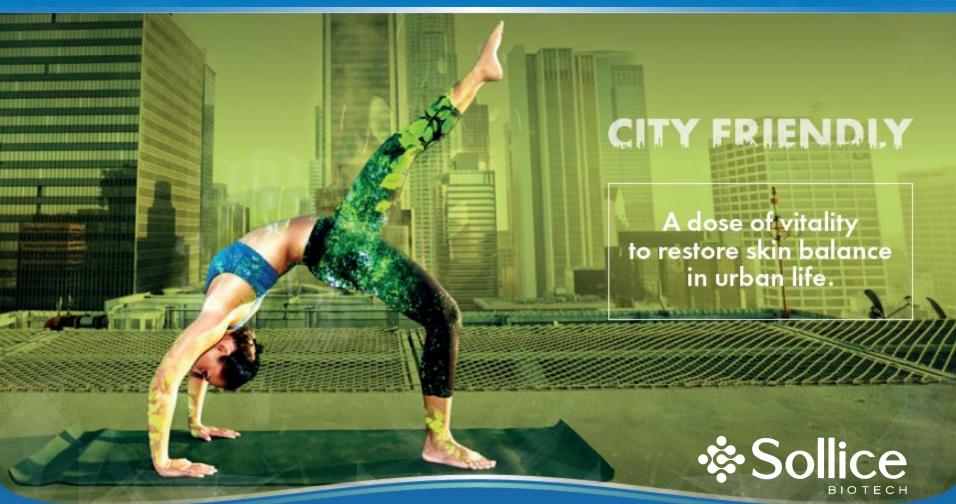
# VITALISIS®



CITY-FRIENDLY / Detoxifying



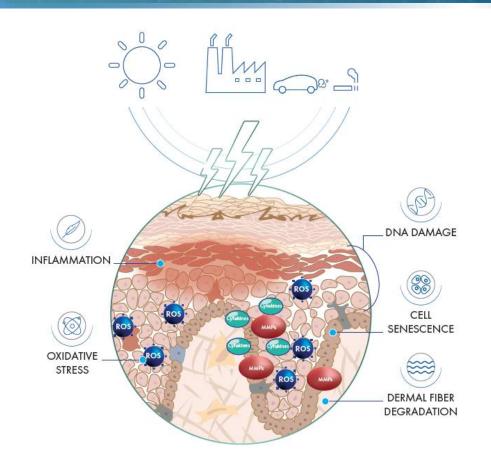
# OUR SKIN NEEDS A HAND TO ADAPT TO URBAN LIFESTYLES.

VITALISIS® IS OUR "CITY-FRIENDLY" COSMETIC ACTIVE INGREDIENT.
IT ADAPTS THE SKIN TO THE ENVIRONMENTAL STRAIN
OF URBAN LIFESTYLES



In addition to its protective role, VITALISIS® restores and reinforces the skin's natural defenses in urban environments, in order to bring back harmony.

# TO FIGHT SKIN PHYSIOLOGY DISORDER



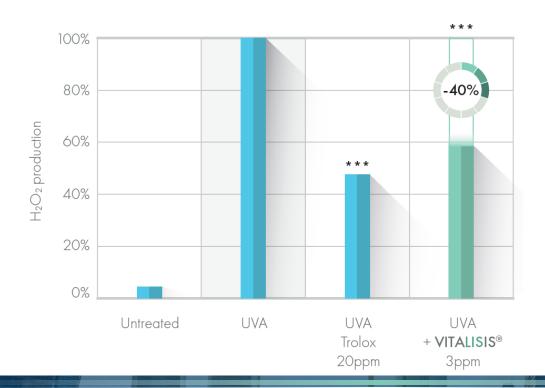
VITALISIS® accompanies the skin to help it adapt to environmental stress.

VITALISIS® covers the **5 aspects of skin pollution.** 

To demonstrate its preventative and curative effects, VITALISIS® has been **tested for gene/protein expression** and **appearance modification in different skin models (cells, explants and volunteers)** after they were submitted to a range of stress factors (UV, heavy metals, cigarette smoke and urban pollution).

### PROTECTION FROM OXIDATIVE STRESS

VITALISIS® strongly decreases oxidative stress & keeps the skin detoxified.



Quantification of  $H_2O_2$  in Keratinocytes exposed to UVA and 24h of Trolox or VITALISIS® treatment.

### CLINICAL EFFICACY

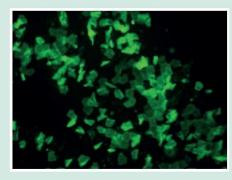


### PROTECTION FROM OXIDATIVE STRESS

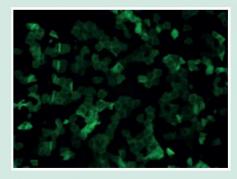
### CARBONYLATED PROTEINS



Day 0



Day 28



Carbonylated proteins were labeled with a fluorescent probe (FTZ) on skin sample surface at day 0 and day 28. (Corneocytes obtained using a cotton swab).

Results with two applications a day of a cream containing 1% of VITALISIS®, applied after facial cleansing for 28 days.

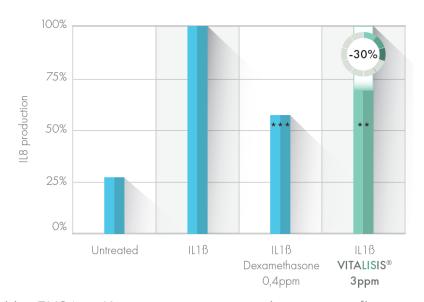
Tests conducted on 21 women, aged 30 to 50, who have an urban lifestyle and with a dull complexion.



### SOOTHING EFFECT

VITALISIS® controls the expression of the main inflammation mediators & decreases skin redness.

#### PROTEIN EXPRESSION



IL8 production quantified by ELISA in Keratinocytes exposed to a pro-inflammatory treatment using IL1ß and Dexamethasone or VITALISIS® during 24h.

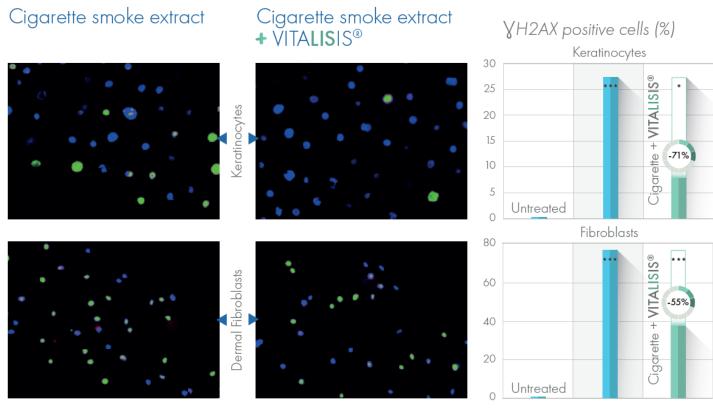
\*\* 0,001 < p < 0,01 \*\*\* p < 0,001

## CLINICAL EFFICACY

# SOOTHING EFFECT



# DNA PROTECTION



Quantification of  $\S H2AX$  positive cells (in green) labelled by immunofluorescence in Keratinocytes or dermal Fibroblasts after exposure to cigarette smoke extract and treatment with VITALISIS® (10 ppm) during 24h. (\*\*\*p<0.001, \*p<0.05).

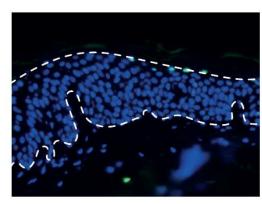
# DNA PROTECTION

 $\gamma$ H2AX marked the cells containing DNA damages.

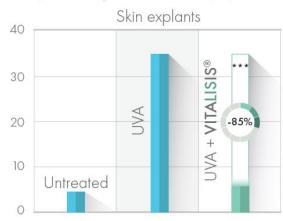
On different models exposed to a range of stress factors, VITALISIS® strongly decreases the amount of  $\gamma$ H2AX positive cells representing DNA damaged cells.

### UVA

### UVA + VITALISIS®



### YH2AX positive cells (%)



Quantification of VH2AX positive cells (in green) by immunofluorescence in skin explant exposed to UVA after 24h of VITALISIS® treatment at 100ppm. \*\*\* p<0,001.



VITALISIS® activates the Sirtuin 6 in dermal cells & maintains the genome integrity.

Gene +66% (qPCR) / Protein +14% (Immunofluorescence)

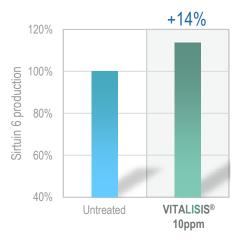
Sirtuin 6 takes part in the overall preservation of genome stability, it is implicated in DNA repair and telomere protection.

#### GENE EXPRESSION

SIRT6 gene +66% in fibroblasts

Gene expression quantified by qPCR on skin cells after 24h of VITALISIS® treatment (3ppm).

#### PROTEIN EXPRESSION



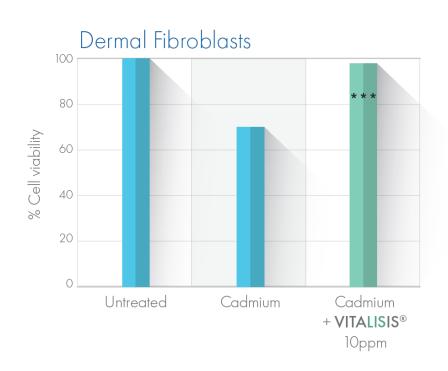
Sirtuin 6 production quantified by Immunofluorescence in skin cells after 48h of VITALISIS® treatment (10ppm).

\*\*\* p < 0,001

# (00)

### PREVENTION FROM SENESCENCE

Regardless of the stress factor applied, VITALISIS® maintains the longevity of skin cells.

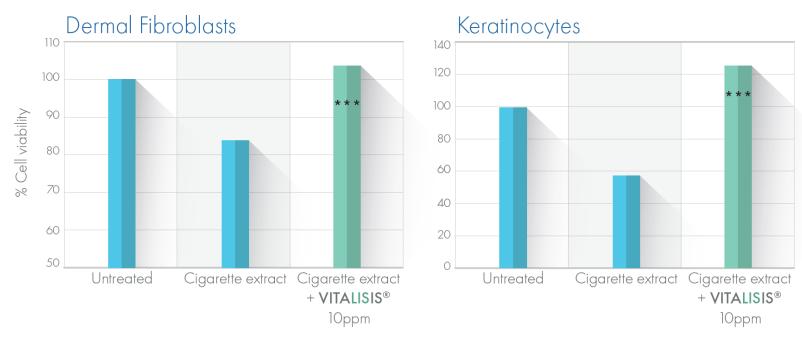


Quantification of cell viability in dermal fibroblasts after exposure to cadmium heavy metal and treatment with VITALISIS® during 24h.

# 00

### PREVENTION FROM SENESCENCE

Regardless of the stress factor applied, VITALISIS® maintains the longevity of skin cells.



Quantification of cell viability in dermal Fibroblasts and Keratinocytes culture after exposure to cigarette smoke extract and treatment with VITALISIS® during 24h. (\*\*\*p<0,001)

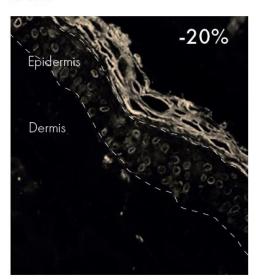


### PREVENTION FROM SENESCENCE

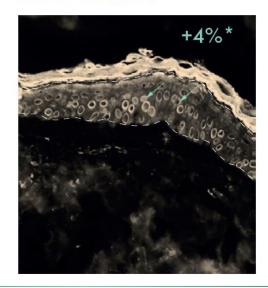
Lamin B1 is a marker that decreases with senescence and requires to be balanced to maintain cell survival. Cell vitality is essential to a healthy skin as it preserves skin texture.

#### UVA

Lamin B1 expression.



### UVA + VITALISIS®



Quantification of Lamin B1 by immunofluorescence in skin explant exposed to UVA after 24h of VITALISIS® treatment (100ppm).

\* p<0,05

VITALISIS® AVOIDS THE DECREASE OF LAMIN B1
PROTECTING THE SKIN FROM CELLULAR SENESCENCE.

### CLINICAL EFFICACY



### PREVENTION FROM SENESCENCE



-16% \*\*\*

Cell viability is warrant of a good skin texture.

Results after two applications a day of a cream containing 1% of VITALISIS®, applied for 28 days after facial cleansing. Tests conducted on 21 women, aged 30 to 50, who have an urban lifestyle and with a dull complexion.

Skin texture was analyzed via VISIA-CR.

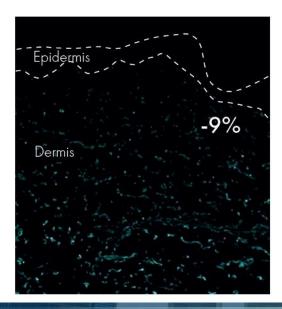


### PRESERVATION OF DERMAL FIBERS

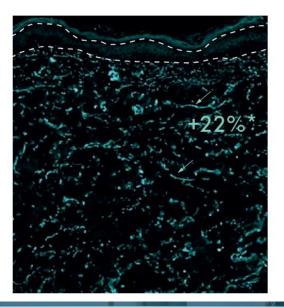
VITALISIS® restores the elastic fibers & protects Collagen fibers from degradation.

Elastic fibers are shortened by UVA exposition. VITALISIS® restores the fibrous aspect.

### UVA



### UVA + VITALISIS®



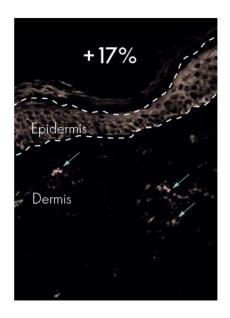
Quantification of Elastin by immunofluorescence in skin explant exposed to UVA after 24h of VITALISIS® treatment at 100ppm.

\*p < 0.05

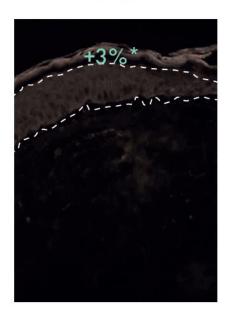
# PRESERVATION OF DERMAL FIBERS

MMP1 is produced by dermal fibroblasts and degrades Collagen. VITALISIS® prevents its activation.

### UVA



### UVA + VITALISIS®



Quantification of MMP1 by immunofluorescence in skin explant exposed to UVA after 24h of VITALISIS® treatment at 100ppm.

\* p<0,05



# CLINICAL EFFICACY - USERS FEEDBACK

# COMPLEXION IMPROVEMENT

- Area of application: Face
   People with an urban lifestyle and a dull complexion.
- Product vs placebo
- Bi-daily use
- Measurements: Skin health, detoxified skin
- Devices : Self-assessment questionnaire



1 % Use 28 Days

42 Solunteers

30-50 Years-old

### CLINICAL EFFICACY

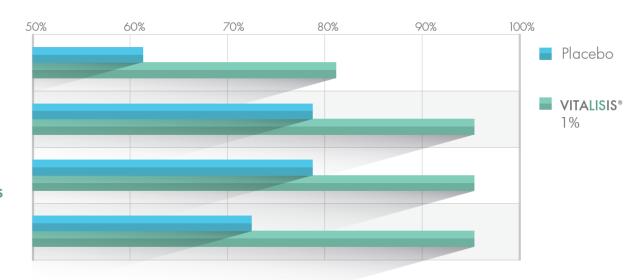
### **USERS TESTIFY**

My skin is detoxified

My skin is purified

These products bring a feeling of freshness

My skin is breathing



86% of volunteers are satisfied of the products versus 68% for the placebo.

VITALISIS® IS YOUR PARTNER FOR INDOOR AND OUTDOOR CITY LIFE.
IT BOOSTS THE SELF-DEFENSE MECHANISMS OF THE SKIN.

# TECHNICAL INFORMATION

At low concentrations, VITALISIS® can be incorporated in all types of cosmetics. For purified, unified, radiant and soothed skin.

### A SKIN THAT BREATHES.

### **APPLICATIONS**

INCINAME

**ASPECT** 

- Face care
- Body care
- Sun care
- Sensitive skin
- Hair care

Citrus Lemon Fruit Extract, Pyridoxine, Glycerin

Slightly Yellow

DOSE OF USE 1%

SOLUBILITY











Water soluble

# TECHNICAL INFORMATION

# COSMETIC APPLICATION

♦ Sollice

See the book

**PRODUCT** 

**VITALISIS®**