



Quels sont les effets du soleil sur le vieillissement cutané et comment agir

Partie 2 : présentation des actifs



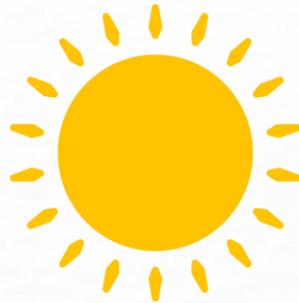
Rappel: Effets de l'exposition au soleil

Réaction
inflammatoire

Formation de
taches

Formation de
rides

Stress oxydant:
- Destruction de l'ADN
- Destruction de l'échafaudage
dermique



Perte d'élasticité
- Relâchement de la peau
- Elargissement des pores

Perte en eau

Rappel: Effets de l'exposition au soleil



Action anti-inflammatoire

Action antioxydante

Amélioration de l'élasticité de la peau

Action sur le volume

Action anti-taches

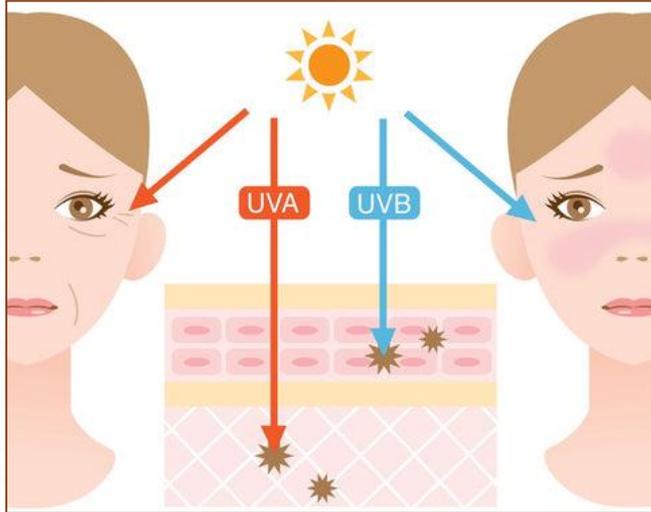


Action anti-inflammatoire



➤ **Phytosphingosine®**

Action anti-inflammatoire



Inflammation: première
réaction de la peau
exposée aux UV

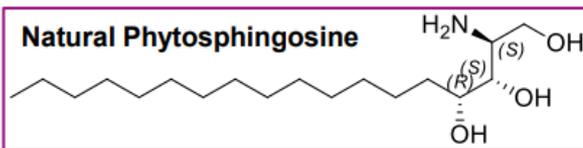
Action anti-inflammatoire

➤ Phytosphingosine[®]

INCI : Phytosphingosine

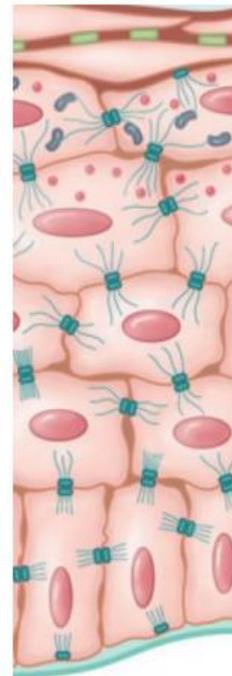
- I_{no} = 1,00
- Cosmos

Base sphingolipidique présente au niveau de la couche cornée sous sa forme libre ou en tant que partie des céramides.



Human Epidermis

Stratum
corneum



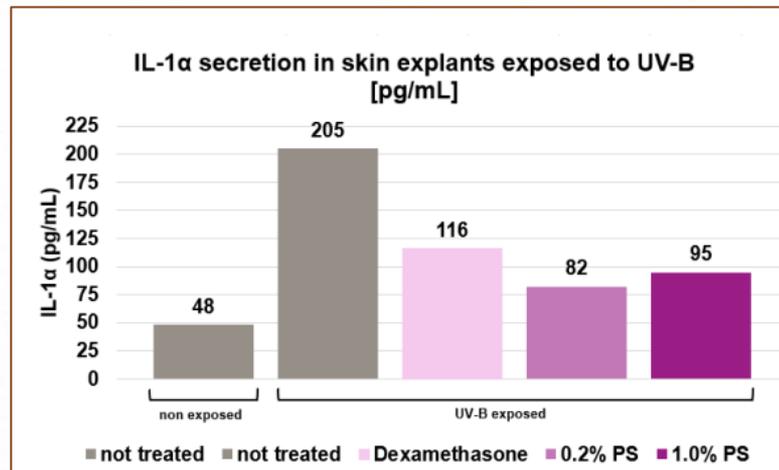
Stratum
basale

Action anti-inflammatoire

➤ Phytosphingosine®

INCI : Phytosphingosine

Action anti-inflammatoire:
Inhibition de l'interleukine 1 α ,
médiateur de l'inflammation



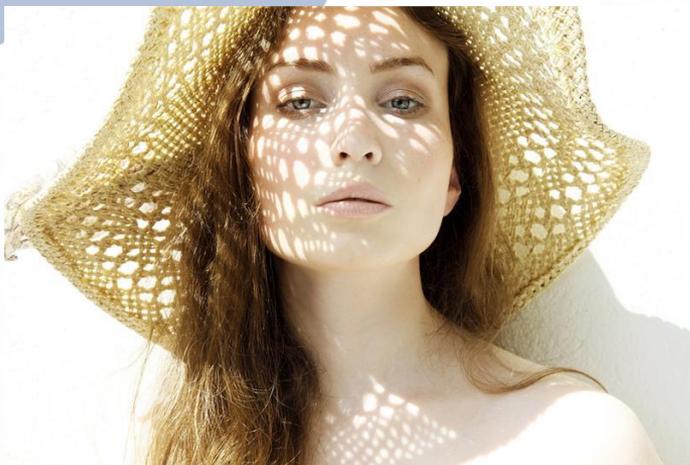
Assessed *ex vivo* on excised human skin



Vehicle: Propylene glycol : Ethanol (60:40)



Measured with ELISA technique



Action antioxydante

- ROVISOME® ACE NG
- ROVISOME® C NG
- SPHINOX® Defenda

Action antioxydante

➤ ROVISOME® ACE NG & ROVISOME® C NG

INCI: Glycerin; Aqua; Lecithin; Tocopheryl Acetate; 3-o-Ethyl Ascorbic Acid; Retinyl Palmitate; Tocopherol; Benzyl Alcohol; Benzoic Acid; Dehydroacetic Acid

INCI: Aqua; Glycerin; 3-o-Ethyl Ascorbic Acid; Lecithin; Lonicera Caprifolium Flower Extract; Lonicera Japonica Flower Extract; Tocopherol; Benzyl Alcohol; Benzoic Acid; Dehydroacetic Acid



- ✓ Vitamines A, C et E encapsulées
→ neutralisation des radicaux libres
- ✓ Vitamine A → action sur la régénération cellulaire

Action antioxydante

➤ ROVISOME® ACE NG & ROVISOME® C NG

INCI: Glycerin; Aqua; Lecithin; Tocopheryl Acetate; 3-o-Ethyl Ascorbic Acid; Retinyl Palmitate; Tocopherol; Benzyl Alcohol; Benzoic Acid; Dehydroacetic Acid

INCI: Aqua; Glycerin; 3-o-Ethyl Ascorbic Acid; Lecithin; Lonicera Caprifolium Flower Extract; Lonicera Japonica Flower Extract; Tocopherol; Benzyl Alcohol; Benzoic Acid; Dehydroacetic Acid

$I_{no} = 0,94$

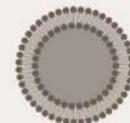
Encapsulation



Protection de la molécule

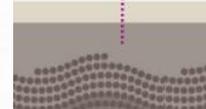
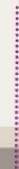


Augmentation de sa biodisponibilité



ROVISOME®
Technology
Advanced skin
delivery system

Delivery Location:
Deep within the
epidermis

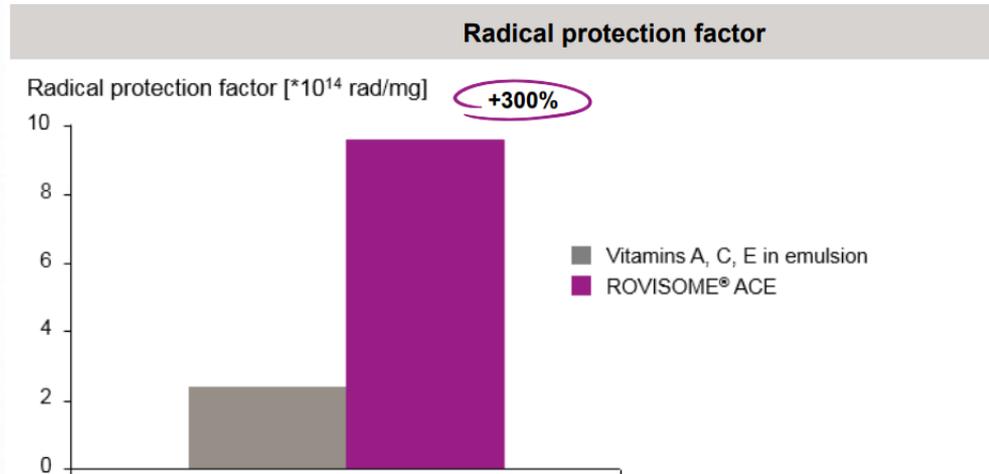


Action antioxydante

➤ ROVISOME® ACE NG

Test de neutralisation des radicaux libres (in vitro)

Test concentration	5 mg/mL ROVISOME® ACE in ethanol/water solution 5 mg/mL emulsion with vitamin A, C and E in ethanol/water solution
Time of measurement	5 min
Measurement	Radical protection factor (RPF)
Observed activity	Concentration of non-reduced radicals by means of electron spin resonance (ESR) spectroscopy

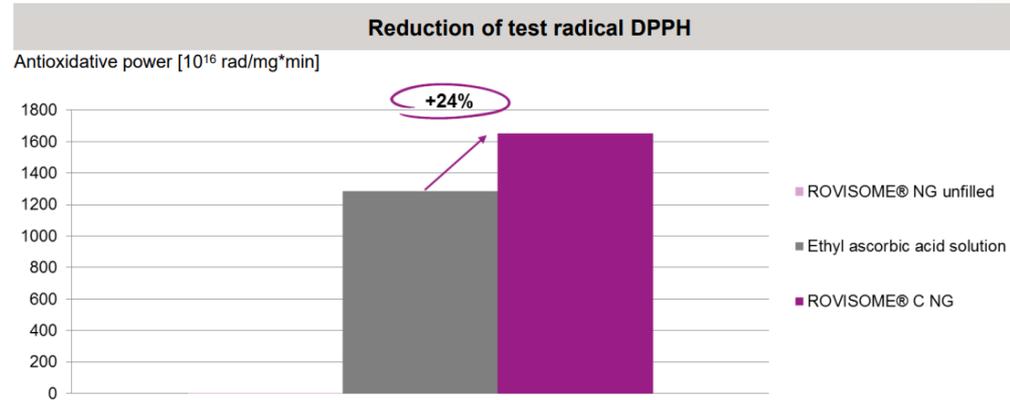


Action antioxydante

➤ ROVISOME® C NG

Test de comparaison du pouvoir antioxydant entre le ROVISOME C NG et une solution d'acide éthyl-ascorbique (in vitro)

Test substances	ROVISOME® unfilled NG ROVISOME® C NG Ethyl ascorbic acid solution at equivalent concentration of the active
Test concentration	Different concentrations
Time of measurement	Different time intervals
Measurement	Anti-oxidative capacity and reactivity and calculation of the anti-oxidative power parameter
Observed activity	Quantitative detection of test radical 2,2-diphenyl-1-picryl-hydrazil (DPPH) reduction by means of electron spin resonance (ESR) spectroscopy



Action antioxydante

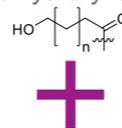
➤ SPHINOX® Defenda

INCI : Hydroxybutyroyl Phytosphingosine

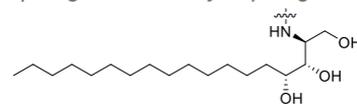
$I_{no} = 0,80$

Composé d'une base sphingolipidique
liée à un acide gras à courte chaîne
→ La courte chaîne + les groupes
hydroxyles permettent à la molécule de
traverser la barrière cutanée et agir en
profondeur

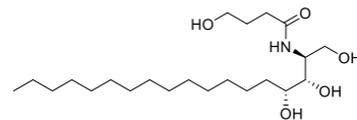
Omega hydroxy fatty acid



Sphingoid base Phytosphingosine



Short chain Ceramide **OP**



Action antioxydante

➤ SPHINOX® Defenda

INCI : Hydroxybutyryl Phytosphingosine

Réduction du stress oxydant



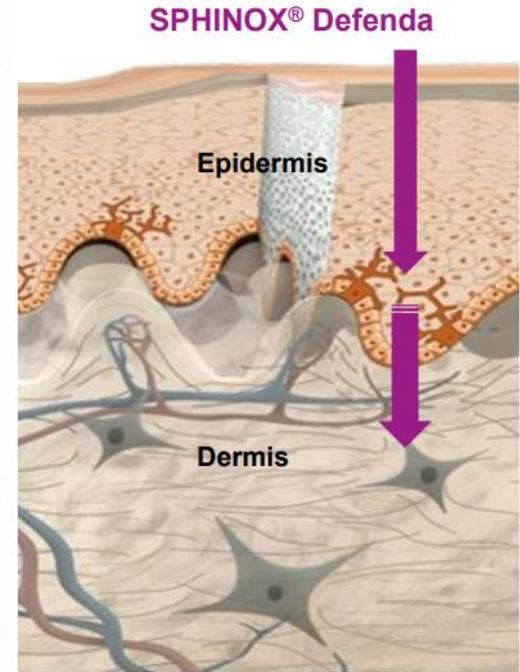
Réduction des dommages sur l'adn



Réduction des dommages aux kératinocytes



Prolifération/renouvellement cellulaire



Action antioxydante

➤ SPHINOX® Defenda

Test : régénération cellulaire de peau exposée au soleil et réduction du « age band » (in vivo)



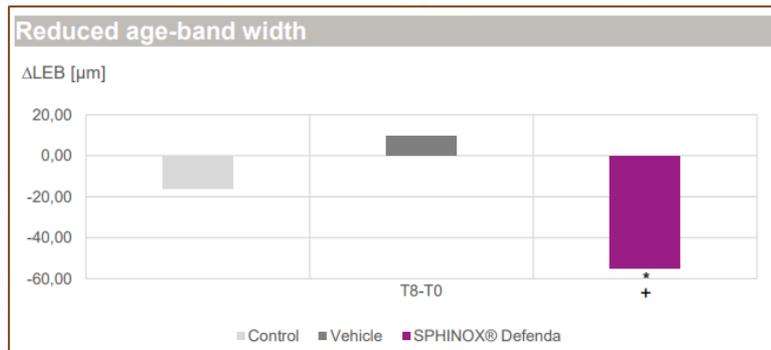
16 panelists per test formulation
Sun-stressed skin (after summer period)



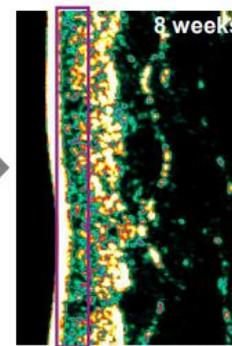
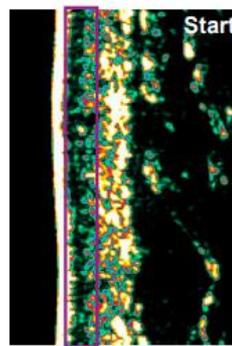
O/W cream with 0.1% SPHINOX® Defenda,
Vehicle; twice daily on forearm



Start
2 weeks, 4 weeks, 8 weeks



Reduction of UV-induced age-band formation

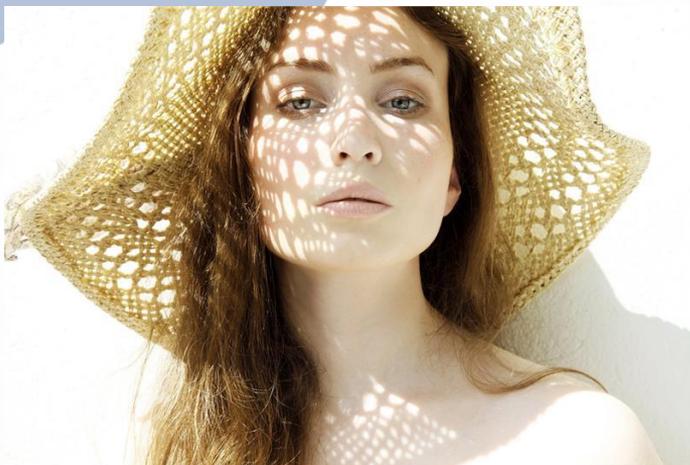


„Age-bands“ can develop between epidermis and dermis after sun-exposure as a sign of photoaging. They reflect a reduction of skin density by oxidative stress.



Epidermis
Dermis
Subcutis

Epidermis
Dermis
Subcutis



Amélioration de l'élasticité de la peau

- **TEGO® Pep UP**
- **TEGO® Pep 4-17 MB**
- **TEGO® Pep 4-Vitality**

Amélioration de l'élasticité de la peau

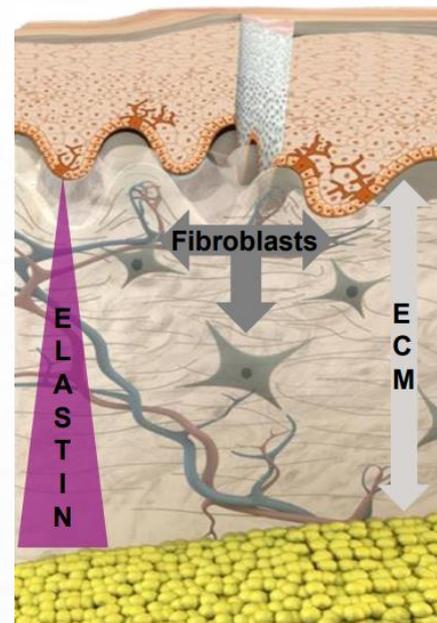
➤ TEGO® Pep Up, TEGO® Pep 4-17 MB, TEGO® Pep 4 Vitality

INCI :

- Tetrapeptide-4, Glycerin, Water
- Tetrapeptide-21, Glycerin, Butylene Glycol, Water
- Tetrapeptide-61

Matrice extracellulaire :

- ✓ Fibroblastes : production des composants de la matrice extracellulaire
- ✓ « Echafaudage dermique » un réseau protéique



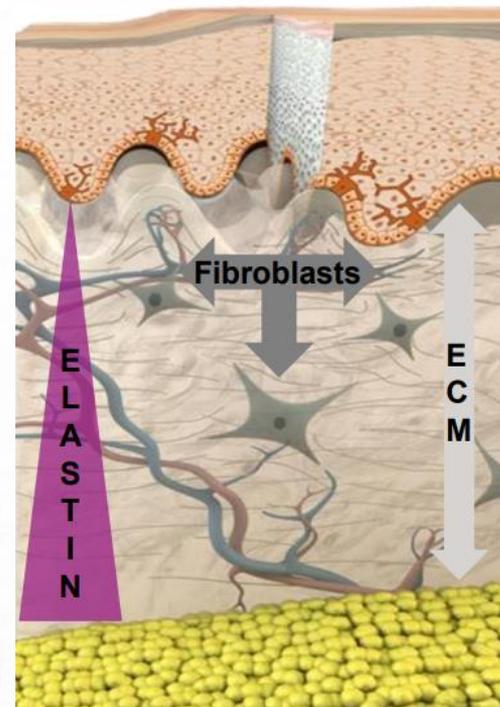
Amélioration de l'élasticité de la peau

➤ TEGO® Pep Up, TEGO® Pep 4-17 MB, TEGO® Pep 4 Vitality

INCI :

- Tetrapeptide-4, Glycerin, Water
- Tetrapeptide-21, Glycerin, Butylene Glycol, Water
- Tetrapeptide-61

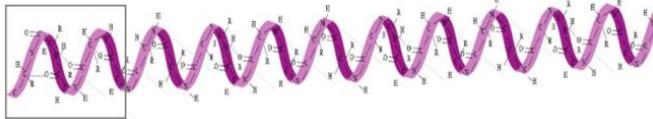
- Collagène: Structure hélicoïdale triple assurant la solidité
- Elastine: Elasticité optimale, permettant à de nombreux tissus du corps de reprendre leur forme après un étirement
- Fibronectine: Lie et stabilise les différents composants



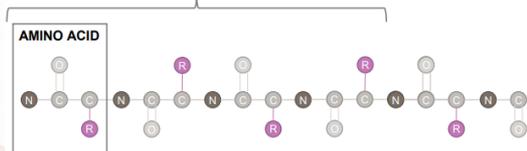
Amélioration de l'élasticité de la peau

➤ TEGO® Pep Up, TEGO® Pep 4-17 MB, TEGO® Pep 4 Vitality

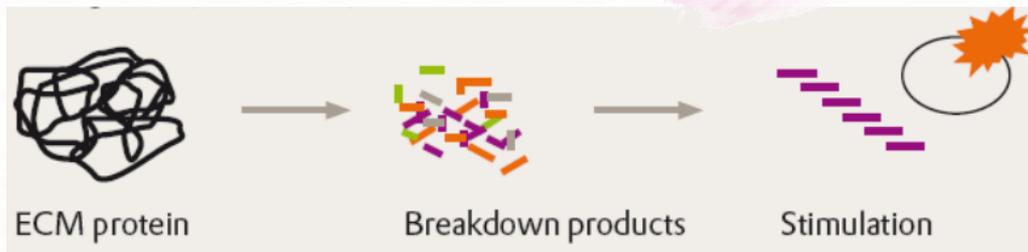
PROTEIN



(TETRA)-PEPTIDE



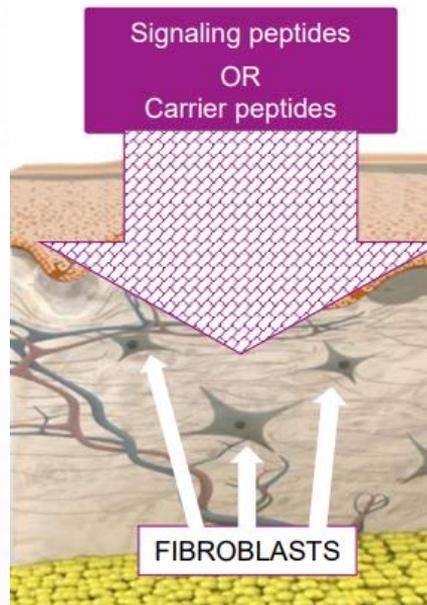
Mode d'obtention
des peptides



Amélioration de l'élasticité de la peau

➤ TEGO® Pep Up, TEGO® Pep 4-17 MB, TEGO® Pep 4 Vitality

Action des peptides :
– upregulation => stimulation
de la synthèse de protéines



Amélioration de l'élasticité de la peau

➤ TEGO® Pep Up

Test : Effet sur la production d'élastine, collagène et fibronectine (in vitro)



human dermal fibroblasts



24h

Analyzed marker genes:

COL1A

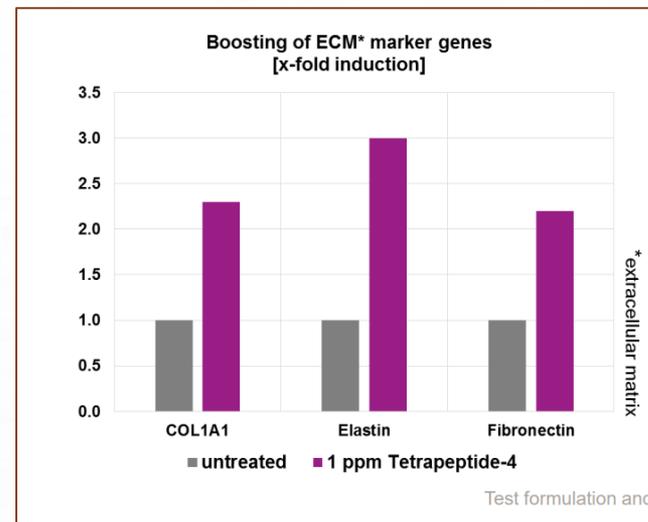
Major component of type 1 collagen which makes up ~80% dry weight of the skin

ELASTIN

allows skin to resume its shape after stretching/contracting

FIBRONECTIN

binds extracellular matrix components such as collagen and fibrin

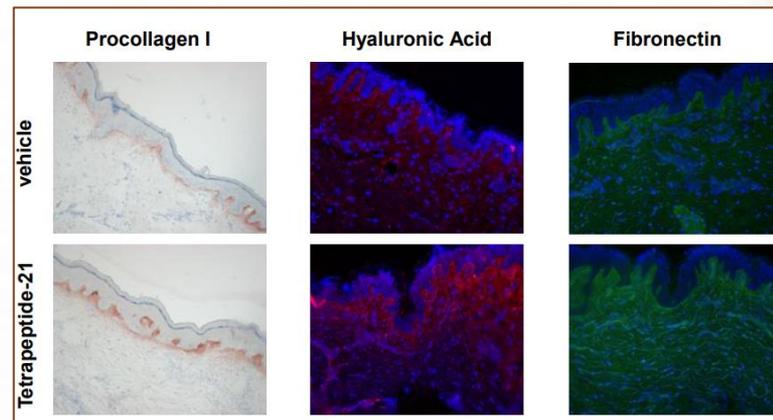


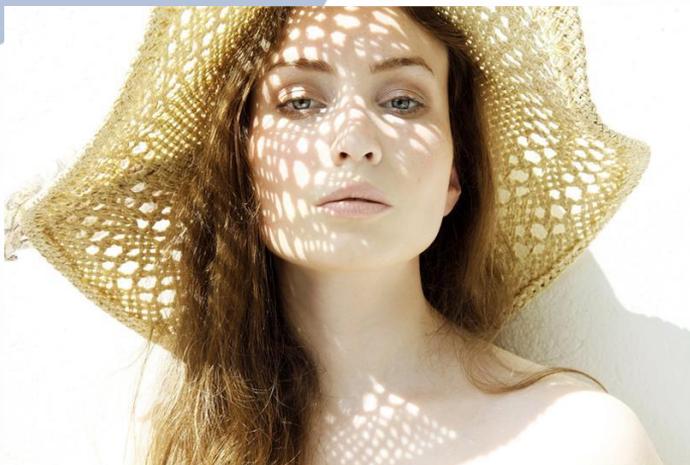
Amélioration de l'élasticité de la peau

➤ TEGO® Pep 4-17 MB

Test : boost de la production de procollagène I, d'acide hyaluronique et de fibronectine (in vivo)

Number of volunteers:	10 older than 40
Application:	O/W vehicle \pm 50 ppm Tetrapeptide-21 (= 2.5% TEGO® Pep 4-17) or untreated 1x/day for 8 weeks on buttock & arm
Selected time point:	after 8 weeks
Analysis:	Punch biopsies qRT-PCR, Histology Cutometer (Courage & Khazaka electronic GmbH, D)
Observed activity:	Increased amounts of Collagen I, Fibronectin and Hyaluronic Acid - Increased skin elasticity
Test Institut:	Prof. Krutmann, IUF-Duesseldorf, D





Action sur le volume

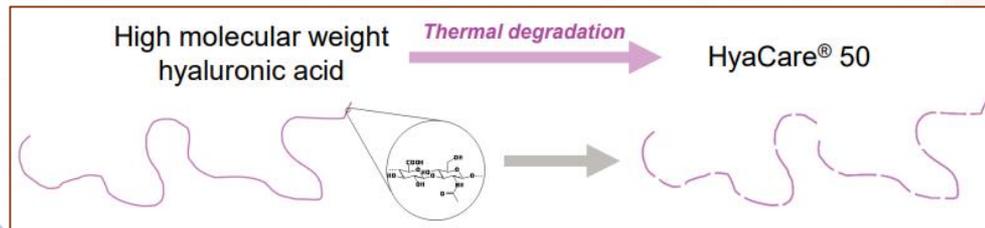
- **HyaCare® 50**
- **SPHINOX® Lift**

Action sur le volume

➤ HyaCare® 50

INCI: Hydrolyzed Hyaluronic Acid

Production par voie
biotechnologique :
fermentation de *B. subtilis* +
dégradation thermique
↓
faible poids moléculaire



Poids moléculaire:
50 kDa

$I_{no} = 1,00$

Action sur le volume

➤ HyaCare® 50

INCI: Hydrolyzed Hyaluronic Acid

Faible poids moléculaire



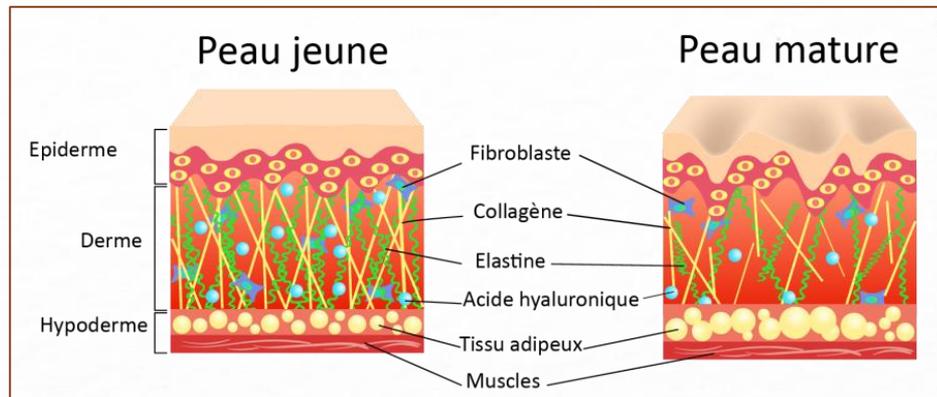
Pénétration en profondeur



Induction de la production d'acide
hyaluronique



Effet « coussin »



Action sur le volume

➤ HyaCare® 50

Test: Réduction de la profondeur des rides
(in vivo)

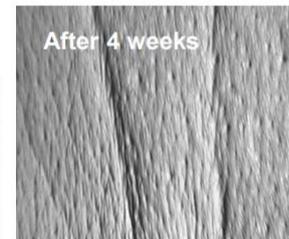
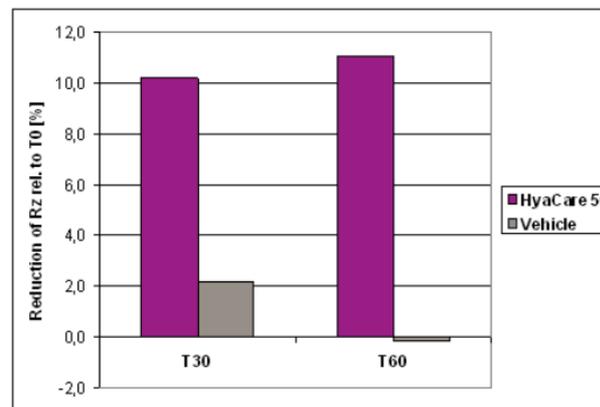
Number of volunteers:	12
Selected application:	O/W formulation
Concentration:	vehicle ± 0.1 % HyaCare® 50
Selected time point:	before and after 4 and 8 weeks of application



Before

After 4 weeks

After 8 weeks



Action sur le volume

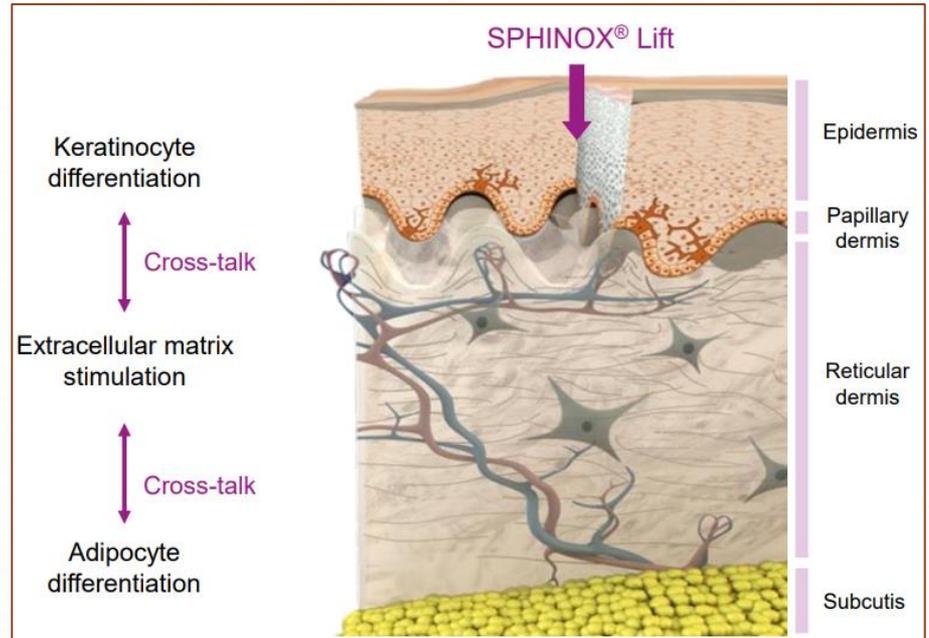
➤ SPHINOX® Lift

INCI : Ceramide NP

$I_{no} = 1,00$

Signal permettant de stimuler la production de collagène + prolifération d'adipocytes

➔ Meilleure organisation du tissu adipeux



Action sur le volume

➤ SPHINOX® Lift

Test: réduction de la profondeur des rides (in vivo)



Caucasian women, aged 50-70 years, 30 volunteers per test formulation



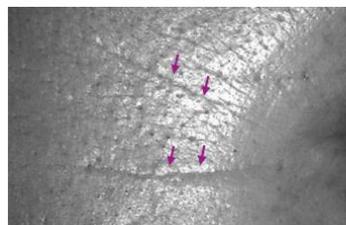
2x/day for 12 weeks, face



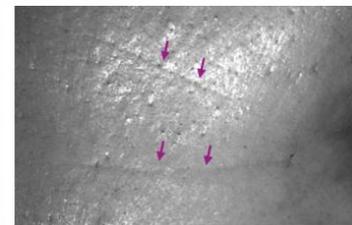
O/W emulsion with 0.2% SPHINOX® Lift, vehicle formulation



Start, 4, 8, 12 weeks
Skin roughness (PRIMOS Pico)

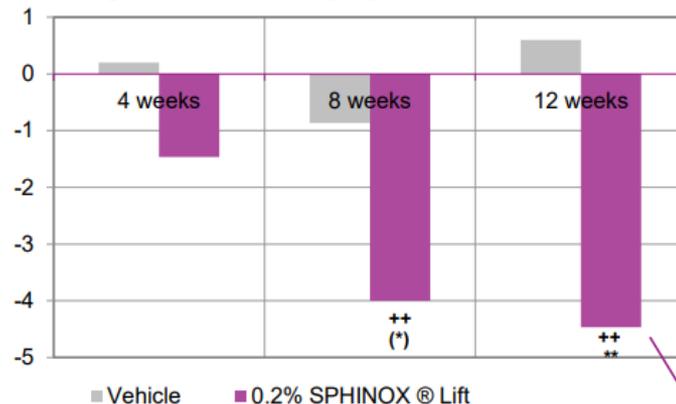


Before application



12 weeks after application

Skin roughness - delta Sa [μm]



t-test ++ p<0.01 vs. start; ** p<0.01, (*) p<0.1 vs. vehicle

SPHINOX® Lift flattens wrinkle depth.

> 4-fold reduced wrinkle depth¹

Action sur le volume

➤ SPHINOX® Lift

Test: Lifting du visage/contour du visage (in vivo)



Caucasian women, aged 50-70 years, 30 volunteers per test formulation



2x/day for 12 weeks, face

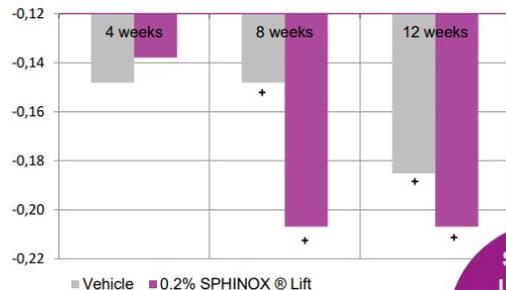


O/W emulsion with 0.2% SPHINOX® Lift, vehicle formulation



Start, 4, 8, 12 weeks
Skin sagging (Expert grading and digital images)

Skin sagging - difference of expert grading score to start

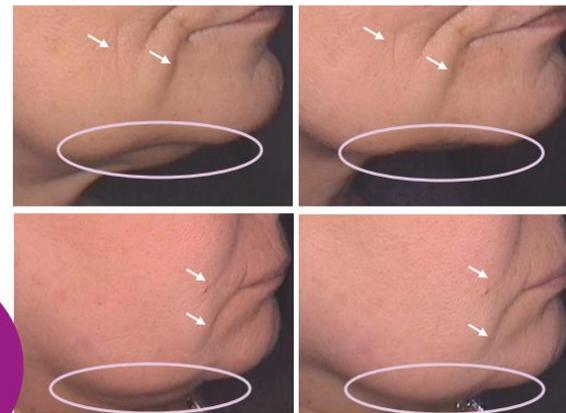


t-test + p<0.05 vs. start

SPHINOX® Lift reduces skin sagging and visibly lifts face contours.

Before application

12 weeks after application





Action anti-taches



- **TEGO® Enlight**
- **TEGO® Renewha Malto**

Action anti-taches

➤ TEGO® Enlight

INCI : Morus Alba Fruit Extract;
Sodium Phytate; Water; Glycerin;
Alcohol

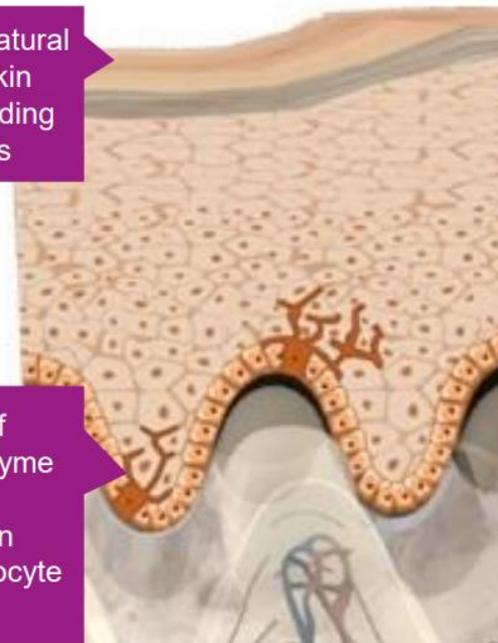
- I_{no} = 1,00
- Cosmos

Double action anti-taches:

- ✓ Inhibition de la tyrosinase → Réduction de la synthèse de la mélanine
- ✓ Action kératolytique → Elimination des cellules avec un excès de mélanine

Stimulation of natural exfoliation (skin peeling) by binding calcium ions

Inhibition of tyrosinase enzyme activity & inflammation induced melanocyte activation



Action anti-taches

➤ TEGO® Enlight

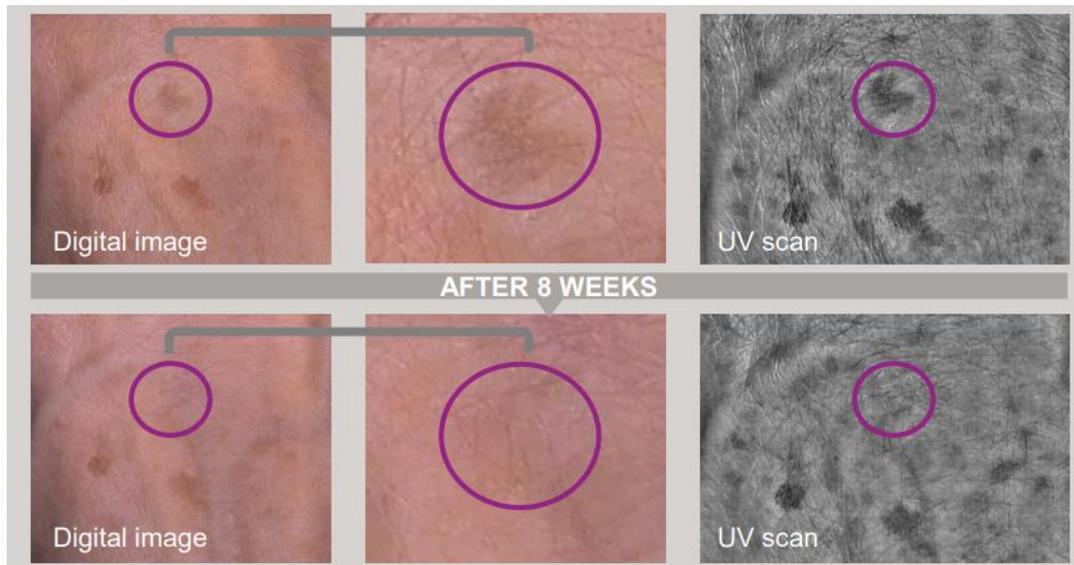
Test : Effet sur des taches de
vieillesse (in vivo)



20 females, dark spots



8 weeks, twice daily



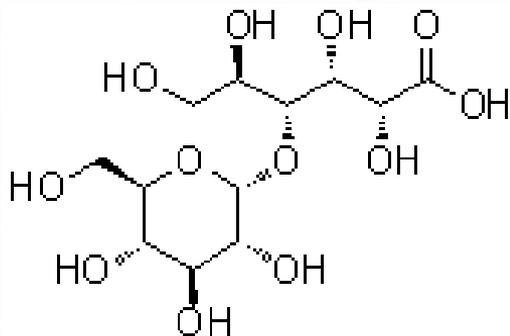
Action anti-taches

➤ TEGO® Renewha Malto

INCI: Maltobionic Acid

$I_{no} = 1,00$

Action kératolytique légère,
grâce à la taille et la structure de
la molécule lui permettant de
moins pénétrer et ainsi être
moins irritante



Exfoliation chimique douce
→ Elimination des taches

Action contre
l'épaississement
de la couche cornée
pendant l'été



MERCI

Des questions ?

ADARA
France 