

FRAGMENTS

REMASTERED



Soluciones integrales
Pochteca

REMASTERED

COL-FRAG™

A NEW COLLAGEN ERA

BSB Innovation Award®
Cosmetics 2022
1. Prize Category Most Innovative Raw Material



Biomimetic type I
collagen fragment



Facelift



Vitamin C
alternative



WILD PLANTS
AS BIOFACTORIES

- INCI name of the active ingredient: Nicotiana Benthamiana Hexapeptide-40 sh-Polypeptide-47
- Non-GMO
- Recommended dose: 1-2%
- Solubility: Water soluble

LIPOTRUE
science & biotechnologies

DESCRIPTION & MECHANISM

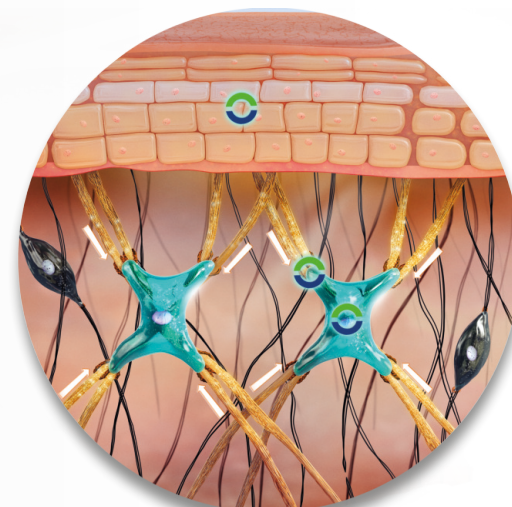
Timeless classics have become must-haves thanks to their record of quality and efficacy. If there is one classic in **cosmetics**, it is **collagen**. Whether in its protein version, hydrolyzed amino acids or collagen booster ingredients, all can provide the longed for collagen claim

However, consumers' needs are evolving and demand **sustainability, animal friendliness, and high efficacy**

Col-Frag remastered™ is a **biomimetic to human type I collagen fragment** produced in Wild plants as biofactories through **vertical farming**. This **sustainable** technology allows us to obtain a molecule biomimetic to a fragment of the human collagen type I sequence, with the proper post-translational hydroxylations required to be **fully functional**

Col-Frag remastered™ acts as a **building block for collagen** synthesis, as a collagen **booster**, and **tightens** the dermis and epidermis while preventing **senescence**. It reveals a synergistic effect and a superior efficacy to Ascorbyl Glucoside in reducing **wrinkles**, providing a **facelift** and enhancing skin **brightness**

A remastered concept for a new collagen era



IN VITRO & HUMAN SKIN EXPLANTS EFFICACY

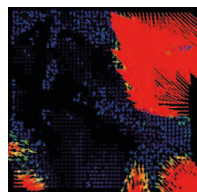
Epidermal compactness



+53% epidermal adhesion vs basal

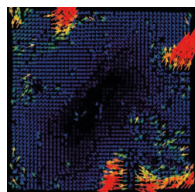


Epidermal tensor effect in human skin explants (fluorescent bead displacement, the redder the higher the displacement)



+200% bead displacement

1% Col-Frag remastered™



+151% bead displacement

40% Sodium Ascorbyl Phosphate

Collagen building



+150% procollagen I vs basal

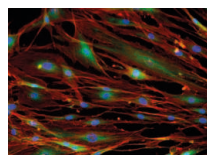
Dermal tension



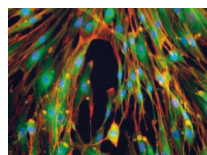
Collagen-fibroblasts binding site reinforcement

(integrin $\beta 1$ in green)

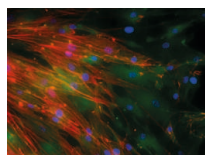
(integrin $\alpha 2$ in green)



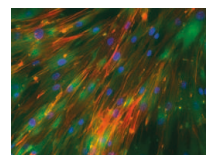
Basal



0.001 mg/mL Col-Frag remastered™



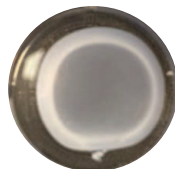
Basal



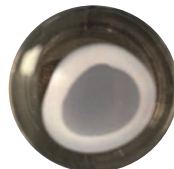
0.001 mg/mL Col-Frag remastered™



+36% ECM contractility (collagen matrix lifting) vs basal



Basal



0.05 mg/mL Col-Frag remastered™

Dermal renewal



Fibroblasts turnover improvement with time (dermal rejuvenation)



-36% senescent cells induced by H_2O_2 vs cells exposed to H_2O_2

IN VIVO EFFICACY

A new collagen era

20 women (50-62 years old) applied a cream with **2% Col-Frag remastered™** on half face and a placebo on the other, twice daily for 28 days. Another panel of 20 women (47-62 years old) applied a cream with 2% Ascorbyl Glucoside on one half of the face and a cream with a combination of **1% Col-Frag remastered™ + 1% Ascorbyl Glucoside** on the other, twice daily for 28 days



Up to 21% less wrinkle length after 30 minutes (2% Col-Frag remastered™)



-19% vs -14% wrinkle depth in 30 minutes (2% Col-Frag remastered™ vs 2% Ascorbyl Glucoside)



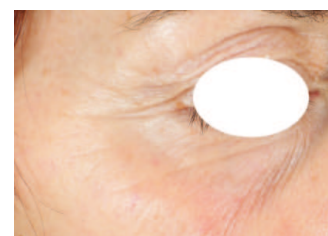
-24% wrinkle depth in 100% volunteers at 28 days (1% Col-Frag remastered™ + 1% Ascorbyl Glucoside)



-2.54 mm lifting in 85% volunteers after 28 days (2% Col-Frag remastered™)



+25% brightness in 85% volunteers after 1 month (2% Col-Frag remastered™)



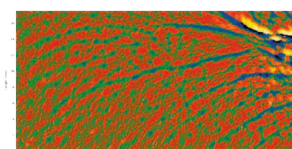
T0 days



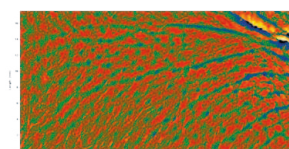
T28 days

-15.4% wrinkle depth
-20.7% wrinkle length

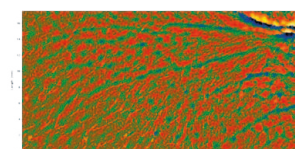
2% Col-Frag remastered™



T0 days



T30 min



T28 days

-10% wrinkle depth
-5.2% wrinkle length

2% Col-Frag remastered™

-32.8% wrinkle depth
-12.8% wrinkle length

2% Col-Frag remastered™