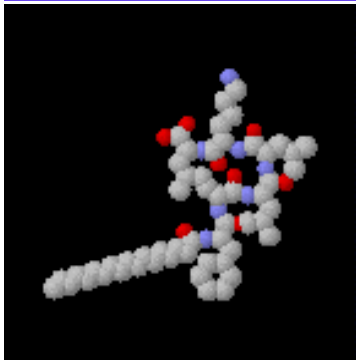




Grant Industries, Inc.

Granactive AGE



Palmitoyl Hexapeptide-14:

A short bioactive peptide consisting of six naturally occurring amino acids with a palmitoyl lipid attached for enhanced skin penetration

INCI Name:

Water (and) Butylene Glycol (and) Ethoxydiglycol (and) Palmitoyl Hexapeptide-14 (and) Lycium Barbarum Fruit Extract (Goji Berry) (and) Sodium Benzoate

Recommended use level:
5%

Patent Status:

Patented Composition and Patent Pending Applications

Patent pending Anti-Wrinkle Palmitoyl Hexapeptide-14 composition with plant-derived glycoconjugates

Granactive AGE is an anti-aging skin care complex combining the activity of Palmitoyl Hexapeptide-14 and plant derived glycoconjugates (Goji berry extract) for a maximum synergistic effect rebuilding skin's extra cellular matrix. Multiple rebuilding pathways are activated including: collagen biosynthesis, fibroblast proliferation and inhibition of destructive matrix metalloproteinases. Anti-aging visible results can be seen in reduction of lines and wrinkles along with an improvement in skin's elasticity. This ingredient can be combined with InvisaSkin DS for increased delivery efficacy and other sensory benefits.

Intracellular Matrix Function

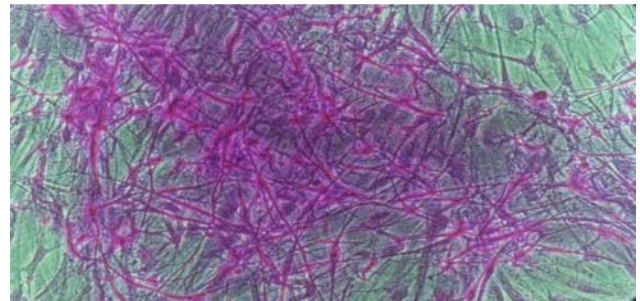
Enhanced anti-wrinkle and lifting effect by stimulation of fibroblast and collagen synthesis and inhibition of MMP-9. Includes glyco-conjugates and a peptide having immuno-modulatory functions that boost host gene expression, act as messengers, and induce chemokine production.



Left side untreated Right side treated with Granactive AGE
Live Fibroblast Cells

Mechanism

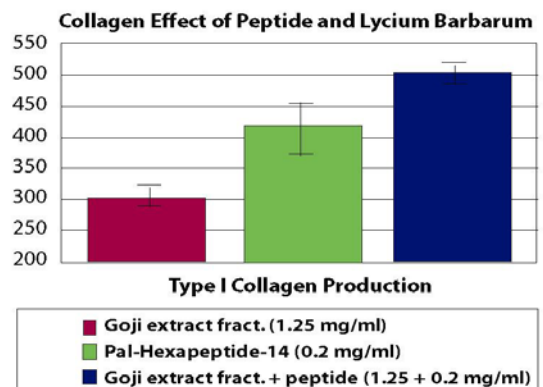
The presence of this anti-aging peptide and Goji berry glyco-conjugate triggers specific natural intracellular messengers to up-regulate desired cellular activities that tend to otherwise diminish with age. The primary characteristic is a dermal fibroblast scaffolding effect that increases three-dimensional cell proliferation leading to dramatically increased skin elasticity and reduction of wrinkles.



Sulforhodimine stained fibroblast cells. 3-D structure in center (treated area) vs monolayer on edges (untreated area)

Targeted Effect and Delivery

Activates the growth of fibroblast cells and collagen production. Formulated so actives penetrate the epidermis and remain hydrated. Fibroblast messaging continues for up to 24-hours via the deliver package of peptide and glycoconjugate in a hydrated polymer matrix co-formulated with a penetration enhancing emollient.



Safety:
Non-cytotoxic, non-mutagenic,
non-irritating, non-sensitizing.

Availability:
Globally

Applications:
Wrinkle treatment, anti-aging and face
lift products in serum, gel cream and
lotion forms.

Formulation:
Water Dispersible

Demo Formulation:
Available by Request



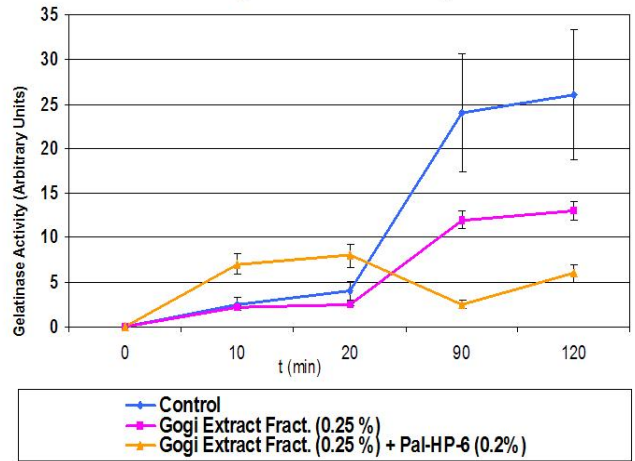
Tibetan Goji Berry

MMP-9 Inhibition

Matrix Metalloproteinase Inhibition

Collagenase activity was measured with Enzchek kit from Molecular Probes (Invitrogen) using quenched fluorescent gelatin and human metalloproteinase-9 preparation. The release of the digested, fluorescent gelatin in the presence of different test materials was measured at excitation/emission wavelengths 485/530nm with Millipore fluorometer. **The combination of Palmitoyl-hexapeptide-14 and Goji berry extract significantly inhibited MMP-9**

Inhibitory Effect on MMP-9 Activity

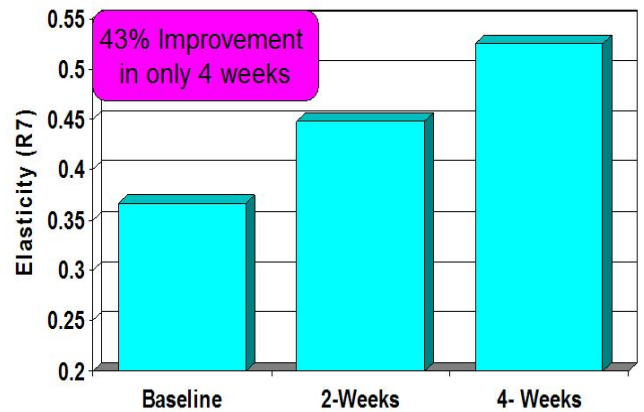


Skin Toning and Elasticity

Increased elastin production firms up skin and helps in recovery from aging, stress and UV damage. Skin firmness and resiliency are assessed by cutometry, which measures the elastic response of the skin over time. A higher degree of elasticity helps lift sags and improve the overall tone of the skin, resulting in a more youthful appearance

Granactive AGE exhibits a statistically relevant elasticity improvement in only four weeks in AMA lab clinical testing.

Skin Elasticity by Cutometry



Clinical anti-wrinkle effect

A twelve-week human panel test of 29 subjects demonstrated that Palmitoyl Hexapeptide-14 is equivalent to RENOVA® (0.05% tretinoin) in reducing the appearance of fine lines and wrinkles with none of the irritation and redness caused by certain retinoid based products.



Time 0



12 weeks

Granactive AGE