



silusyne™

New molecular mechanism for the persistent problem of cellulite

Novel delivery system in the submicron scale range

Reduces adipogenesis by decreasing PGC-1 α

Flattens the dermo-hypodermal junction



Description

Active ingredient that reduces adipocyte differentiation by decreasing Peroxisome proliferator-activated receptor Gamma Coactivator 1 α (PGC-1 α) expression. An impaired adipocyte maturation rate results in a lower lipid accumulation in the adipose tissue. **silusyne™** diminishes irregularities on skin surface due to a reduction of fat nodules responsible for cellulite.

Appearance

Opaque gel containing 0.05% active ingredient.

INCI

Water (Aqua), Soybean (Glycine Soja) Oil, Propanediol, Sorbitan Sesquioleate, Isohexadecane, Hydroxypropyl Starch Phosphate, Sclerotium Gum, Sodium Hyaluronate, Lauryldimonium Hydroxypropyl Hydrolyzed Soy Protein, Acetyl Hexapeptide-39.

Paraben free.

Properties

silusyne™ reduces adipogenesis by decreasing PGC-1 α expression. This new ingredient helps to improve the appearance of visible cellulite as dermo-hypodermal junction irregularities are smoothed.

Dosage 2%

Solubility

Dispersible in water.

Science

Cellulite is a persistent problem in modern society and it appears due to several factors such as genetics or gender but also because of unhealthy lifestyles. Visible fat nodules are a consequence of an increase in adipocyte volume and number that leads to greater fat depots that distort the connective tissue, affecting the lymphatic drainage system as well. Therefore, waste materials cannot be removed and, together with collagen fibres, create an immobile network where fat cells are trapped. As a result, the dermo-hypodermal junction line becomes more irregular and cellulite manifests on skin surface.

PGC-1 α is a transcriptional coactivator that interacts with the Peroxisome Proliferator-activated Receptor PPAR γ . PGC-1 α is involved in adipogenesis and by modulating its expression, adipocyte maturation rate can be regulated.

silusyne™ is a peptide in a new and specific delivery system that decreases preadipocyte differentiation and hence lipid accumulation in the adipose tissue by reducing PGC-1 α expression.

Applications

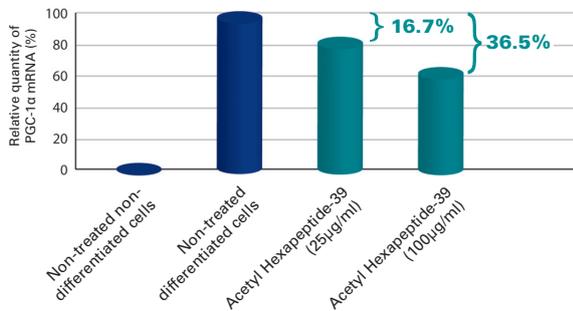
silusyne™ is a perfect ingredient for anti-cellulite and slimming treatments and as a complement in any type of body care formulations.



In vitro efficacy

1. EFFECT ON PGC-1α EXPRESSION

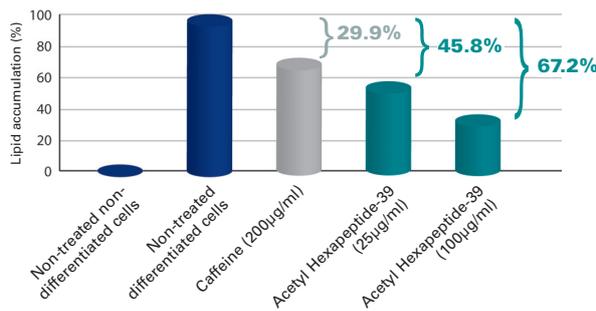
Human preadipocytes were incubated in a growth medium and differentiated with Preadipocyte Differentiation Medium (PDM-2) in presence of silusyne™. After 10 days, cells were lysed, RNA was extracted and reverse transcription was performed. The resulting cDNA was analysed by quantitative RT-PCR.



silusyne™ reduced the expression of PGC-1α by more than 36%

2. EFFECT ON LIPID ACCUMULATION

silusyne™ was added to human preadipocytes during their differentiation with Preadipocyte Differentiation Medium (PDM-2). After 10 days, levels of intracellular lipid droplets were measured by fluorescence.



Cells treated with silusyne™ show lower lipid accumulation than cells treated with caffeine

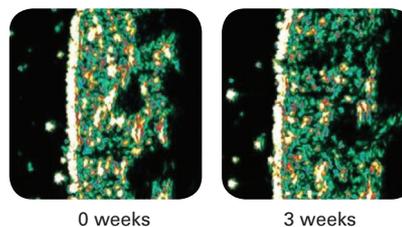
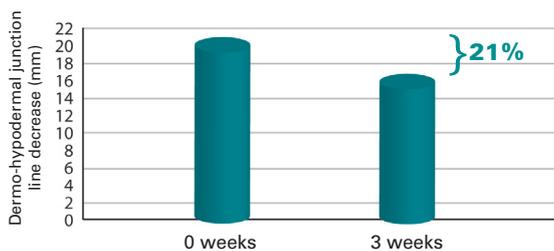
In vivo efficacy

EVALUATION OF DERMO-HYPODERMAL JUNCTION

In order to study the efficacy of silusyne™ as an anti-cellulite and slimming ingredient, a decrease in length of the dermo-hypodermal junction was measured. This represents an improvement of the cutaneous and subcutaneous tissue uniformity.

20 female volunteers (aged 25 to 45) applied a cream containing 2% silusyne™ on one thigh and a placebo cream on the other twice a day for 3 weeks.

An ultrasound ecograph in B-scan mode (Ultrasound Scanner Dermascan C®) was used to measure the length of the dermo-hypodermal junction line.



Skin surface is improved with silusyne™. silusyne™ enhanced the uniformity of the skin by 21% after 3 weeks and 5-fold versus placebo.