



Special  
chemicals

# SCH Actives™ Gluta Gold C

Actives for the skin



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# 01 Introduction



# 01

## Introduction

**SCH Actives™ Gluta Gold C** is a unique active ingredient that conjugates gold with ubiquinone and glutathione.

## Main activities

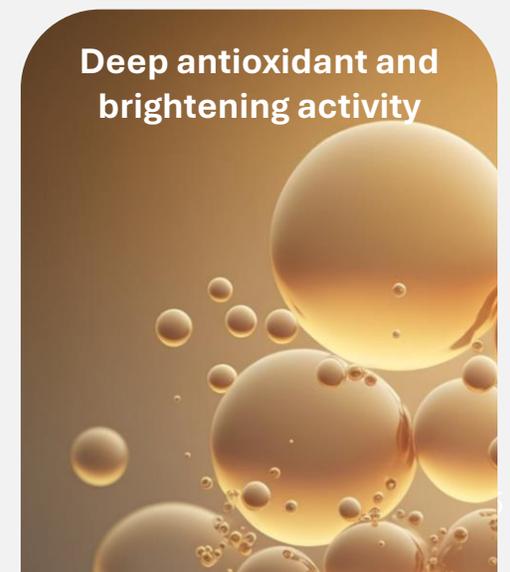
- Fights oxidation
- Promotes radiance
- Evens skin tone
- Detoxifies skin
- Improves skin elasticity





# 01 Composition

INGREDIENT	%	FUNCTION
Aqua	Up to 100	Solvent
Xanthan gum	0,4 – 0,6	Thickening agent
<b>Gold</b>	0,025 – 0,035	Active
<b>Glutathione</b>	0,015 – 0,025	Active
<b>Ubiquinone</b>	0,015 – 0,025	Active
Propanediol	4 - 6	Preservative
1,2-hexanediol	0,8 – 1,2	Preservative
Caprylyl glycol	0,8 – 1,2	Preservative





# 02

## Ingredients



## 02 Ingredients

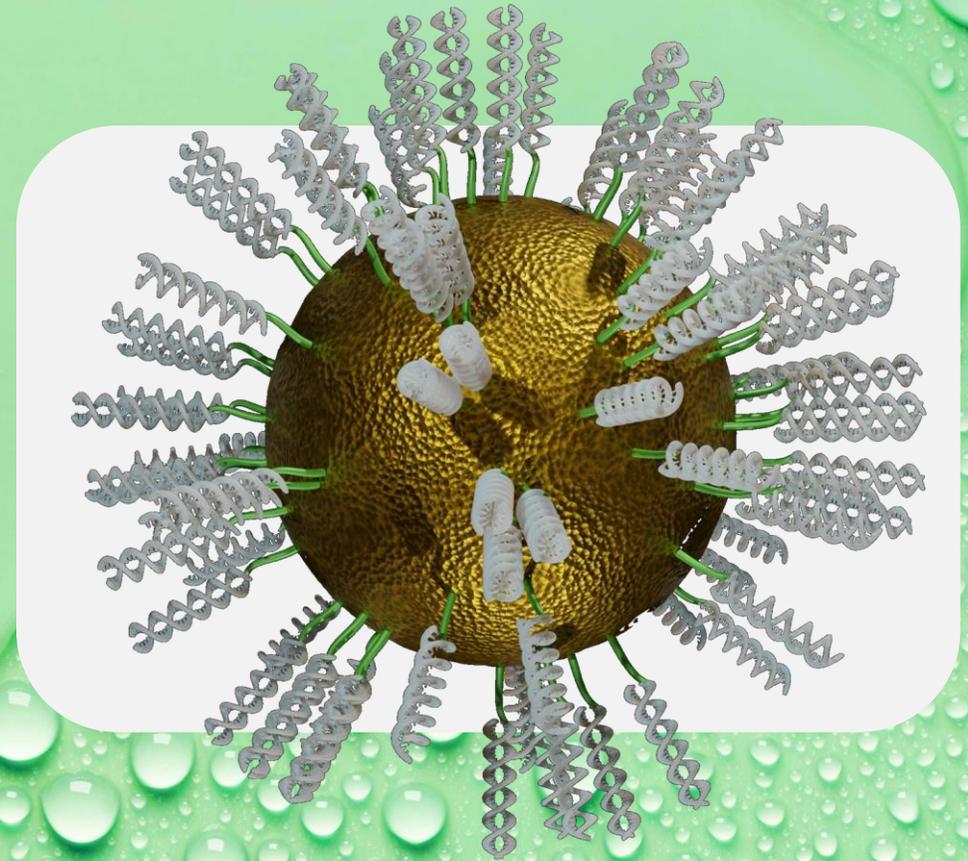
### 1. Gold

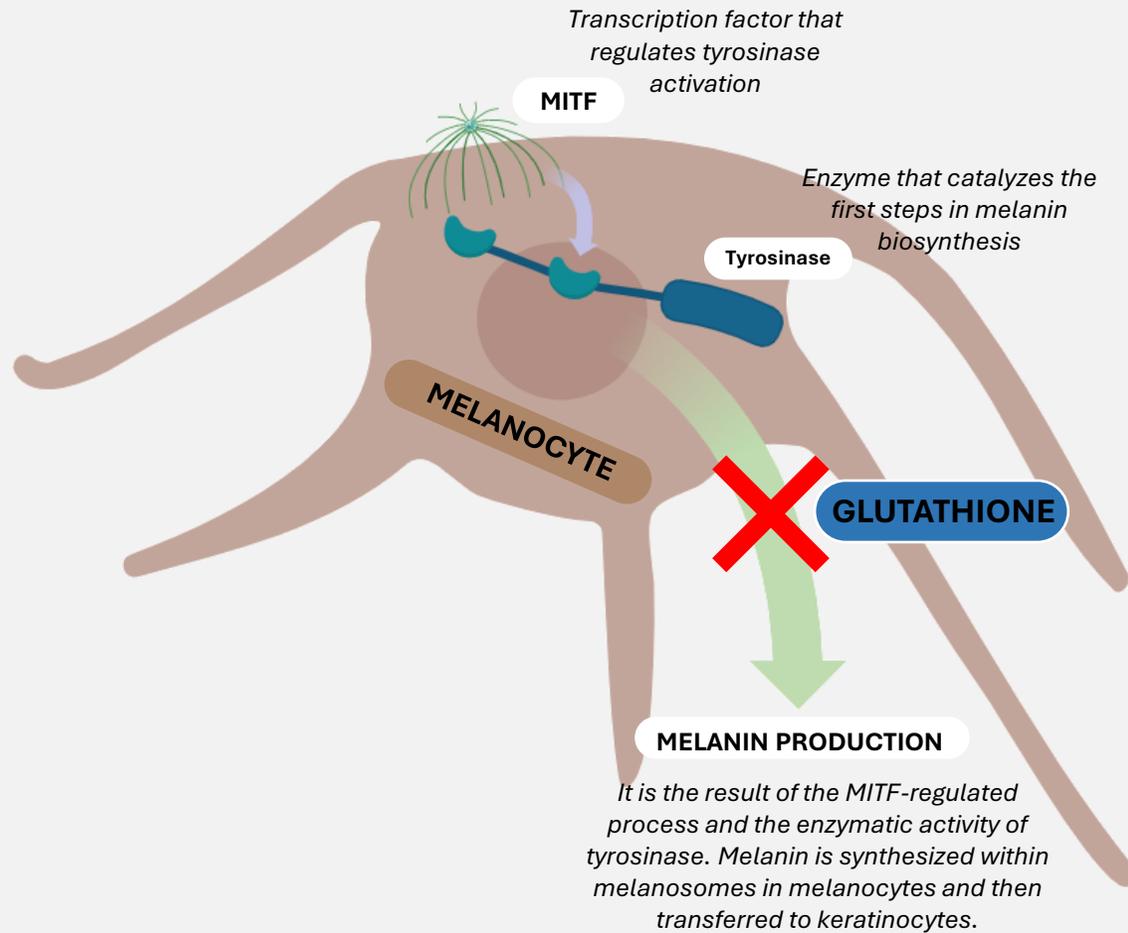
Antioxidant / Skin rejuvenation / Active carrier

Gold is a luxury cosmetic ingredient renowned for its antioxidant properties and **ability to rejuvenate the skin**. As a noble metal, gold particles enhance cell regeneration and improve skin elasticity, reducing the appearance of fine lines and wrinkles.

When used as a carrier, gold nanoparticles **facilitate the delivery of active ingredients** deep into the skin, ensuring optimal efficacy. This enhances the bioavailability and stability of the actives, maximizing their benefits. Gold's anti-inflammatory properties also help to soothe and calm irritated skin, making it **ideal for sensitive and aging skin types**.

With particle sizes greater than 100 nm, it does not meet the criteria to be considered a nanomaterial and is also not biopersistent, ensuring **safety and compliance**.





## 02 Ingredients

### 2. Glutathione

Antioxidant / Detoxification / Brightening

Glutathione is a master antioxidant known for its ability to neutralize free radicals and support detoxification processes within the skin. It helps **reduce oxidative stress**, which can lead to premature aging and damage. Glutathione also plays a key role in inhibiting melanin production by inhibiting tyrosinase activity, promoting a **brighter and more even skin tone**.

This ingredient is particularly beneficial in brightening and anti-pigmentation formulations, as it **diminishes dark spots and enhances overall skin clarity**. Additionally, glutathione helps protect against environmental pollutants and toxins, making it a powerful agent in maintaining **youthful, radiant skin**.



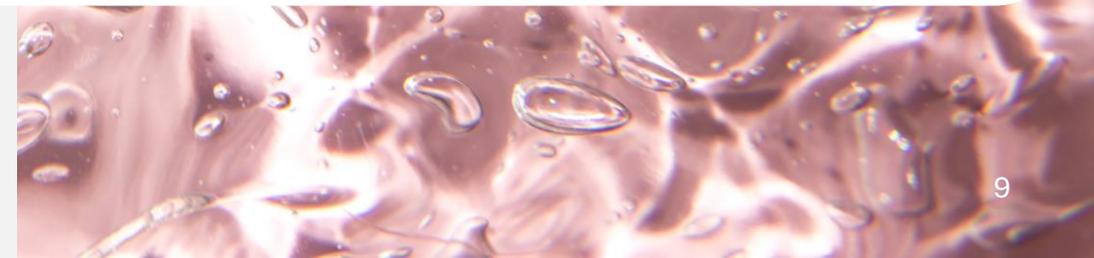
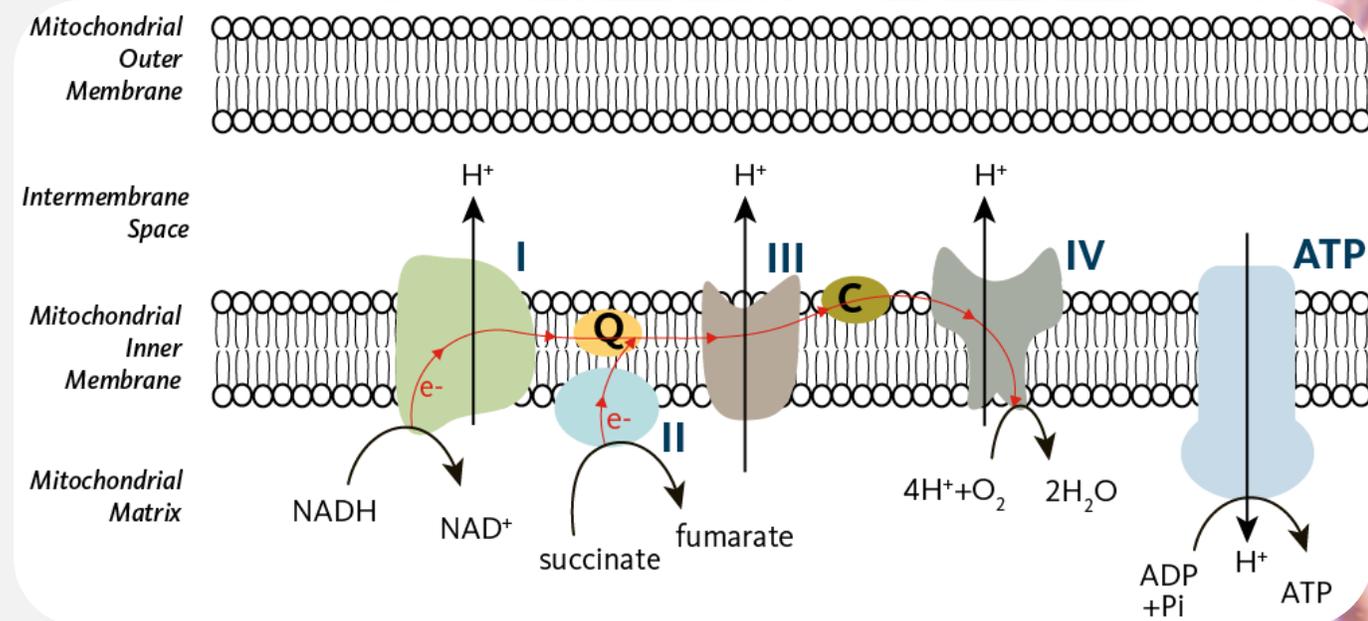
## 02 Ingredients

### 3. Ubiquinone

Antioxidant / Skin firming / Antiaging

Ubiquinone (CoQ10) is a vital antioxidant that protects the skin by **neutralizing free radicals** and preventing oxidative damage. It plays a key role in cellular energy production, which helps maintain skin vitality and youthfulness. Coenzyme Q10 is a lipid-soluble component of the mitochondrial inner membrane that is **critical to electron transport** (in red) in the mitochondrial respiratory chain. Coenzyme Q10 carries electrons from complexes I and II to complex III, thus **participating in ATP production**.

It also stimulates collagen production, improving skin firmness and elasticity, while reducing the appearance of fine lines and wrinkles. This ingredient is highly effective in anti-aging formulations, as it **combats premature aging caused by UV exposure and environmental stressors**. Ubiquinone also enhances the performance of other antioxidants, promoting overall skin protection and rejuvenation.

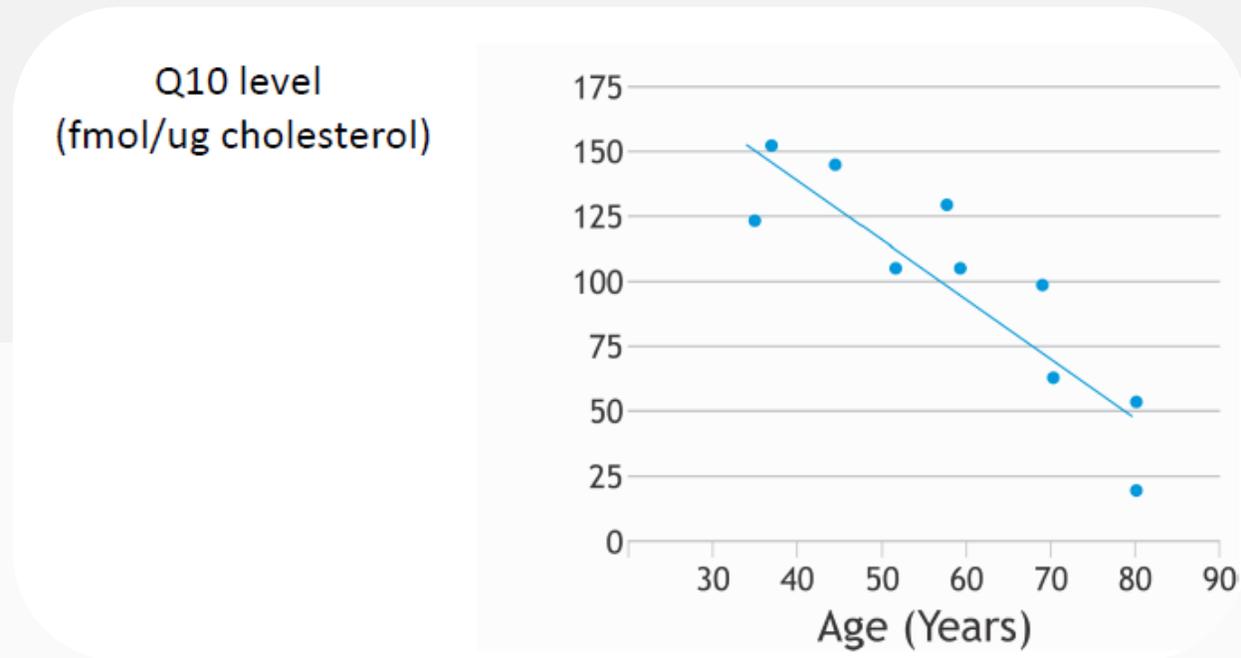




## 02 SCH Actives™ Gluta Gold C fights against the loss of Coenzyme Q10

CoQ10 levels decrease in the epidermis between the ages of 30 and 80 years. Values are normalized to the cholesterol content of the samples (*Hoppe et al Biofactors 9: 371-378, 1999*)

**SCH Actives™ Gluta Gold C compensates Q10 epidermal loss induced by aging.** The functional loss of mitochondria explains aging; therefore, restoration of mitochondrial function rejuvenates skin. CoQ10 is the most important factor for effective mitochondrial function.





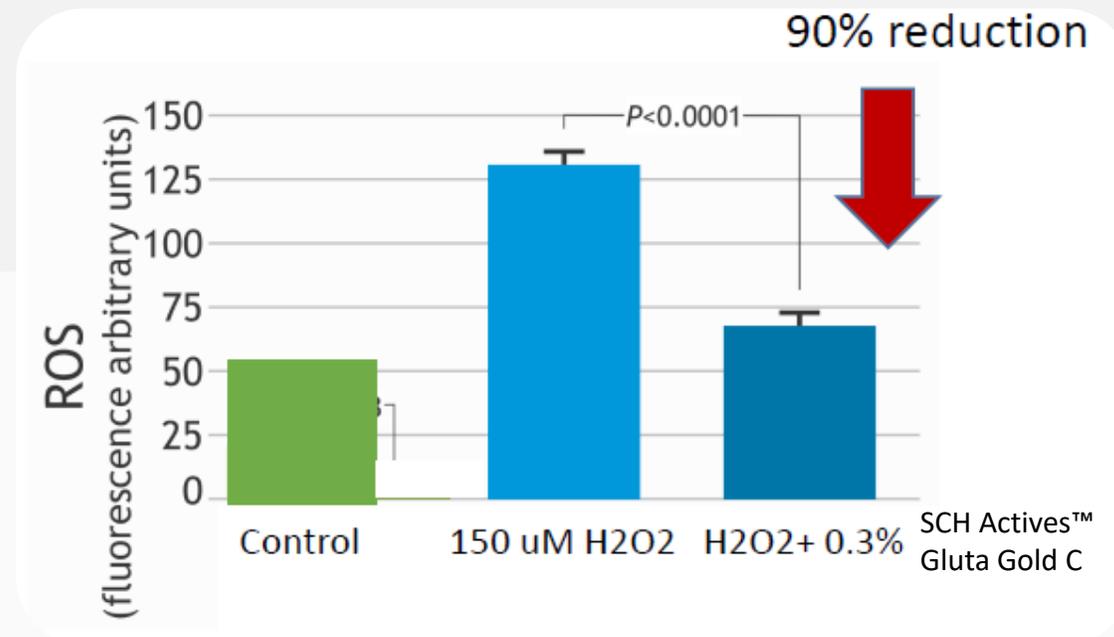
# 03 Studies

520 ml  
3.3 ORB



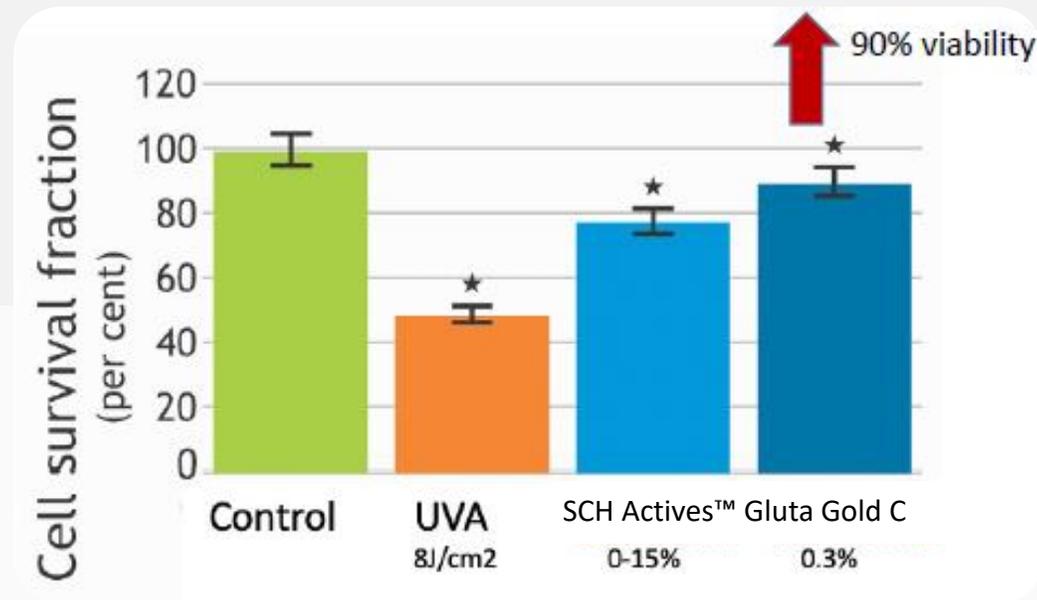
### 03 SCH Actives™ Gluta Gold C inhibits generation of reactive oxidative species (ROS) in keratinocytes exposed to H2O2

HaCaT keratinocytes showed a significant elevation in ROS immediately after oxidative challenge. The elevation in ROS is blocked by **SCH Actives™ Gluta Gold C**. The fluorescence intensity (Ex: 485 nm per Em: 530 nm) of each cell lysate was measured. Intracellular ROS levels are expressed as change in fluorescence intensity per  $\mu\text{g}$  protein.



### 03 SCH Actives™ Gluta Gold C protects keratinocyte viability after UV challenge

Cell viability was evaluated through a MTT test a yellow compound that is bio-reduced by cells into a purple-coloured formazan product. This conversion is accomplished by NADPH or NADH produced by dehydrogenase enzymes in metabolically active cells. The cells were treated with MTT (1mg/ml) and incubated for 3 hours later solution of MTT was discarded and 100 µl of isopropanol were added in each well in order at 570 nm.

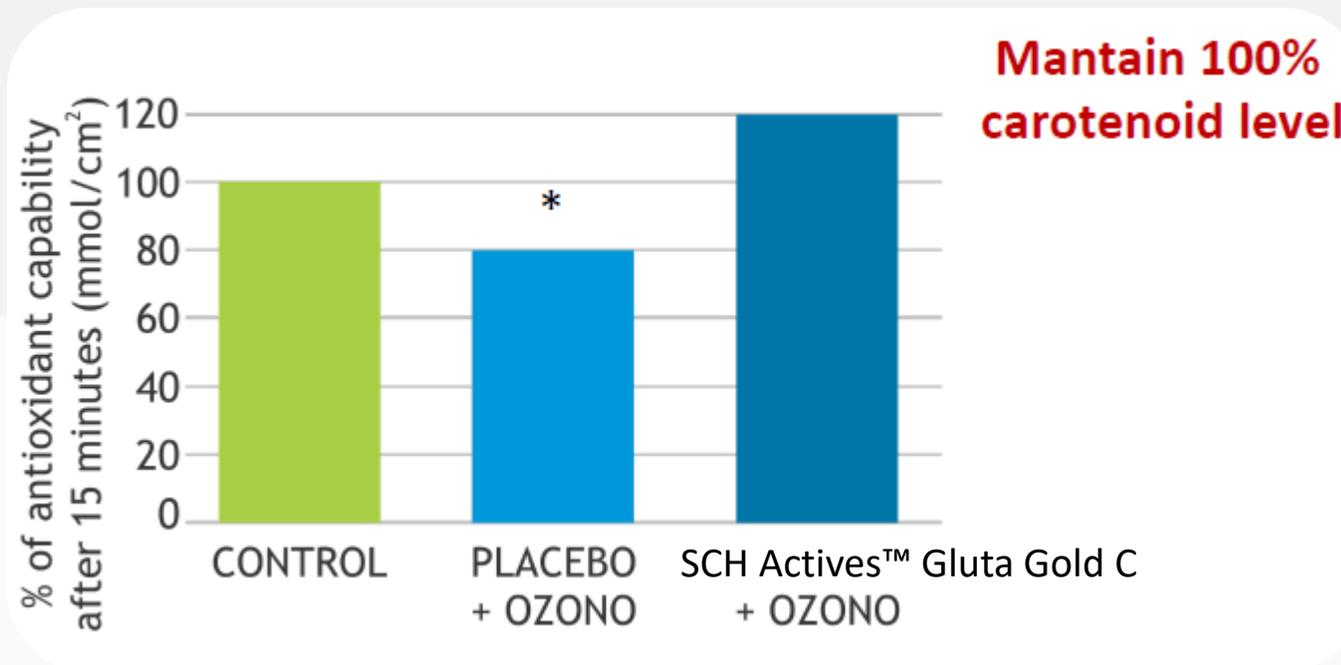




### 03 In vivo study: $\beta$ -carotenoids skin level after oxidative challenge with ozone

Skin was exposed to Ozone flow during 15 minutes after application of placebo or **SCH Actives™ Gluta Gold C** onto face. Carotenoids autofluorescence measured on the cheeks at D0 and D0+15, for hemiface treated with placebo or 0,3% **SCH Actives™ Gluta Gold C** cream.

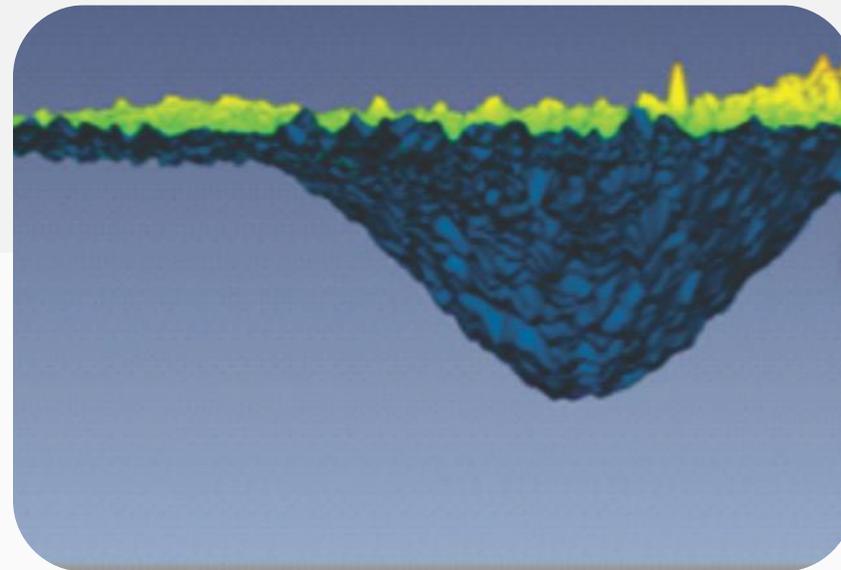
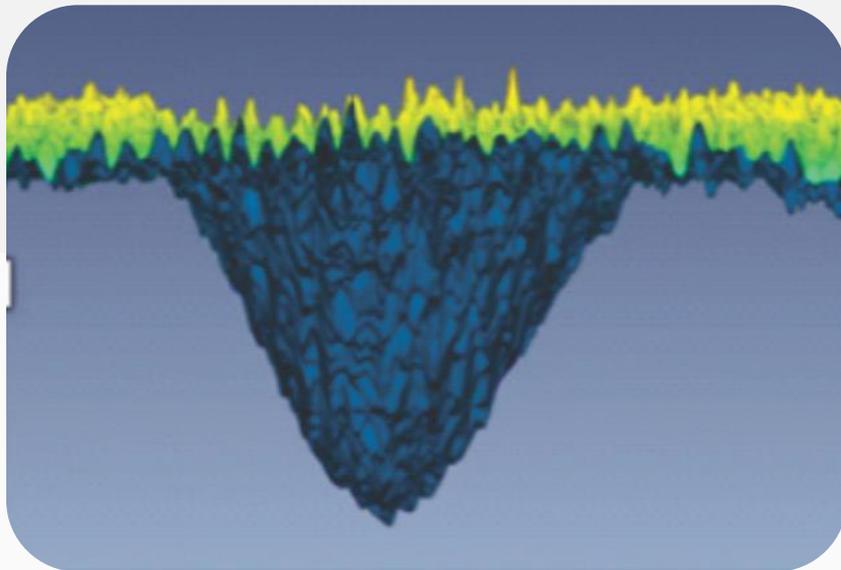
**SCH Actives™ Gluta Gold C** (0,3%) protects against oxidative damage and keeps carotenoid skin level



### 03 In vivo study: SCH Actives™ Gluta Gold C effect on skin elasticity

Study performed on 35-60 years old, applied twice daily during 28 days, **SCH Actives™ Gluta Gold C** 0,30% in cream application.

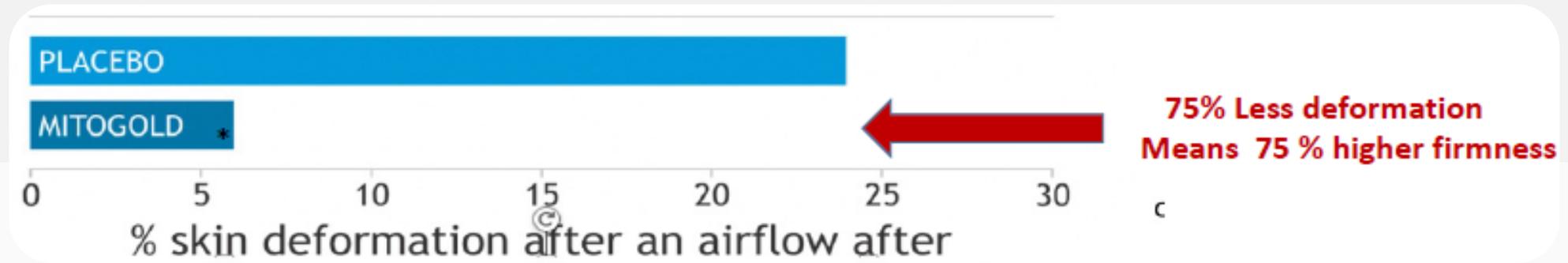
Images of skin deformation using DynaSKIN. Volume and maximum depth deformation measured after a calibrated airflow beam in placebo (left) vs **SCH Actives™ Gluta Gold C** groups (right).





### 03 In vivo study: SCH Actives™ Gluta Gold C effect on skin elasticity

DynaSKIN, uses a positive pressure to deform the skin and test its response to mechanical force application. The instrument releases a force-calibrated jet of air, close to the skin surface, that indents the skin simulating, tactile judgement of firmness. The deformations' 3D geometry and deformation recovery are quantifiable. These parameters correspond to the mechanical properties of the skin described by its stiffness or firmness. **The larger the deformation, the less firm the skin** (as seen in previous slide).



28 days treatment with 0,3% **SCH Actives™ Gluta Gold C**



# 04

## Specifications





## 05 Technical specifications

CHARACTERISTIC	SPECIFICATION
Aspect	Liquid
Color	Purple pink to dark lilac
Odor	Characteristic
Dosage (%)	0,3
Particle size	100 – 300 nm
pH	3,5 – 6,5
Solubility	Dispersible in water
<b>Regulatory status</b>	
Europe	OK
China	OK
USA	OK





# SCH Actives™ Gluta Gold C

**Actives for the skin**