



# NanoWhite

## Triple activity for skin brightening

# Market Overview

Skin discolorations are today considered to be an aging sign like wrinkles, a decreased cell renewal rate or loss of firmness.

→ Whitening = a **supplementary** anti-aging response



Corrects both wrinkles and age spots



Fights against wrinkles, skin discolorations  
Improves skin tone and protection

# Market Overview

The demand for dark spot correction is not limited to Asia:

**Dior**



In Europe



In Asia

**CHANEL**



In Europe



In Asia

# Market Overview

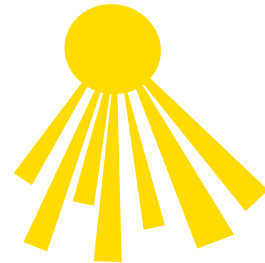
There is a new trend of “skin-tone perfecting products” using whitening active ingredients



Evens skintone  
Dismisses dullness  
Erases fine and dry lines



# Skin Colour and Melanin



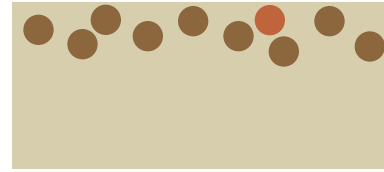
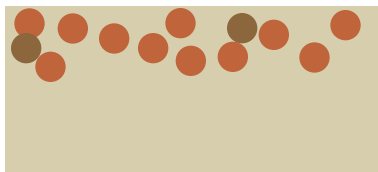
tyrosine



eumelanin

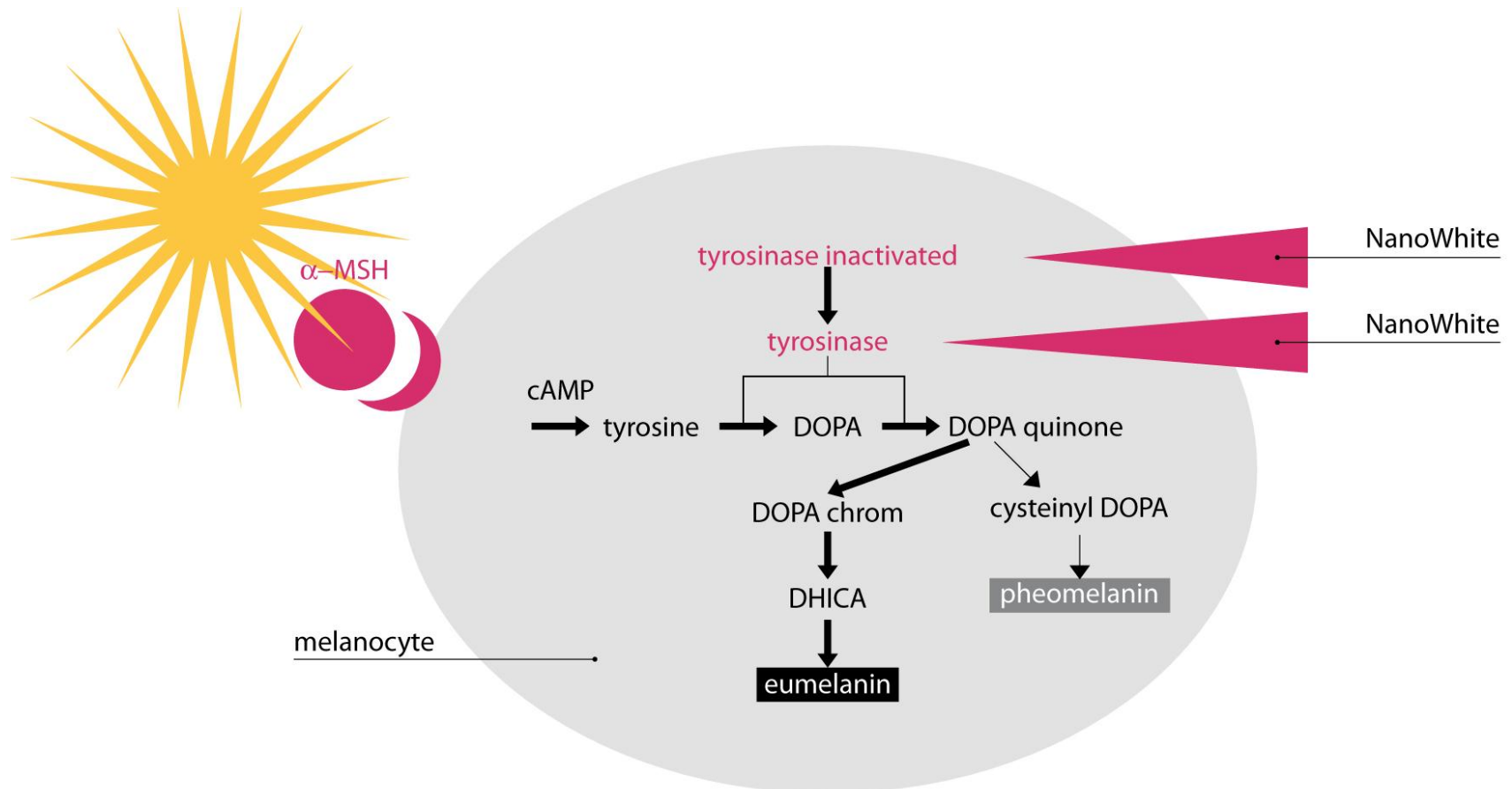


pheomelanin

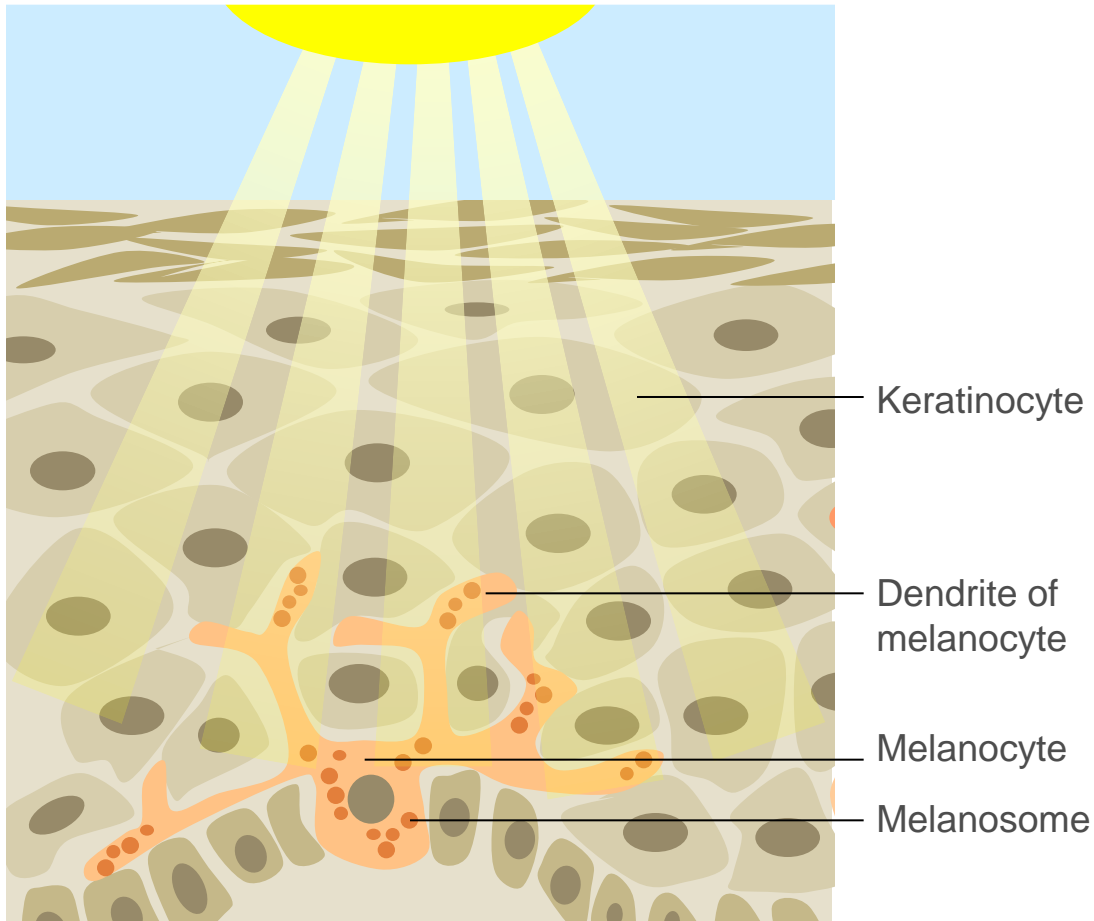


Different skin types

# Melanogenesis Process



# Skin Pigmentation Process



# Skin Pigmentation Disorders



Hormonal variations



Sun exposures



Photo-aging



Skin irritations or inflammations

▼  
Generate free radicals, oxidants and irritation signals

▼  
Can disturb the pigmentation process

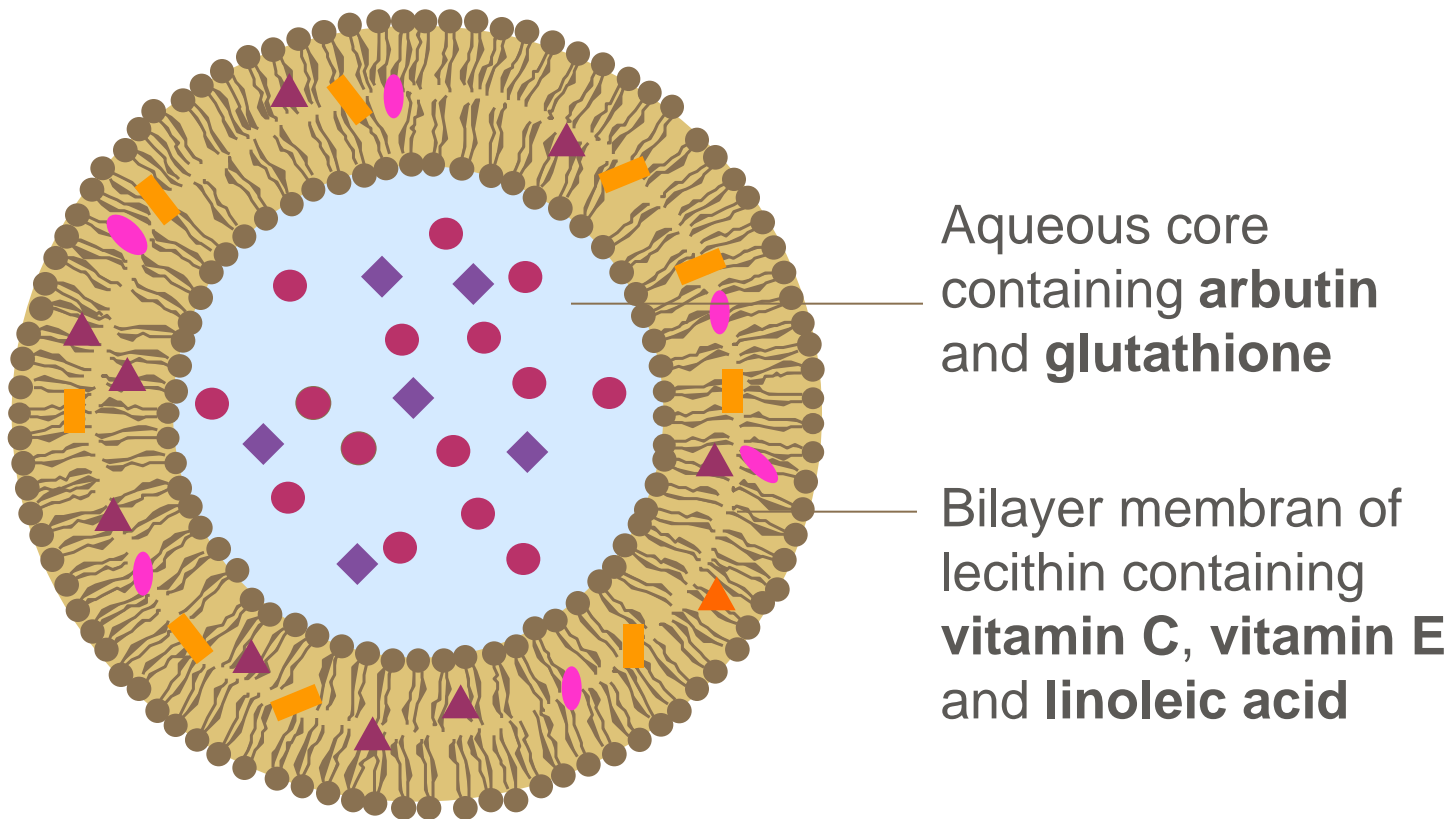
▼  
Local discolorations + hyper-pigmentations leading to brown spots



# Composition of NanoWhite

- Lecithin
- Arbutin
- Linolenic Acid
- Linoleic Acid
- Tocopheryl Acetate
- Ascorbyl Palmitate
- Glutathione
- Alcohol
- Aqua/Water

# NanoWhite: a Combination of Whitening and Anti-Oxidant Ingredients



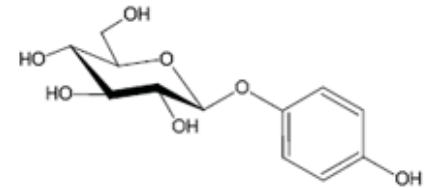
# Benefits of the Liposomal Form

- Protection of the encapsulated materials from **deactivation**
- Combination of **water- and oil-soluble** compounds
- **Bioavailability** ↑
- Enhanced and long-lasting **activity**

# Arbutin, a Natural Compound in Bearberries



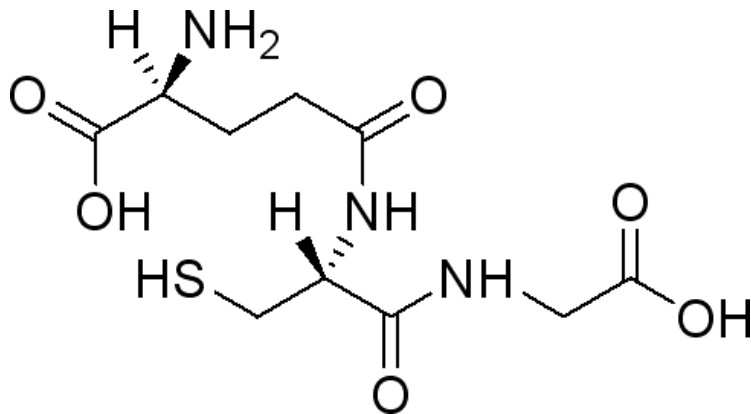
Bearberry leaves contain arbutin, a natural derivative of hydroquinone.



## Arbutin

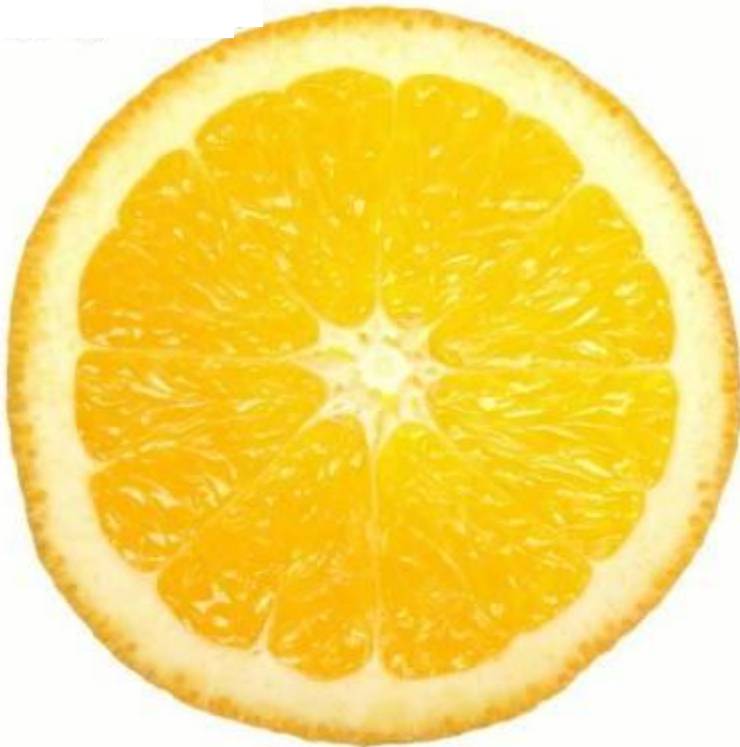
- strongly inhibits tyrosinase activity
- is more stable and safer than hydroquinone
- allows continued use for a long period of time
- activity not bound to tyrosinase toxicity

# Natural Reduced Glutathione



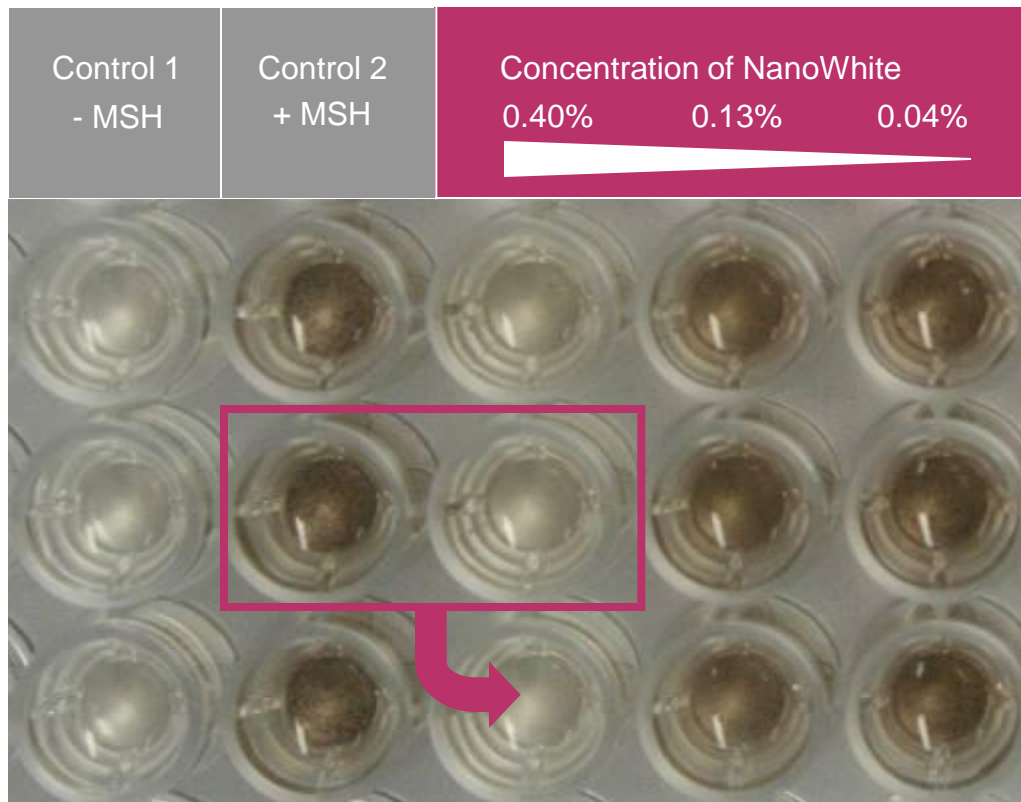
- Tripeptide found in the human body
- One of the skin's strongest antioxidants
- Inhibits the tyrosinase activity thanks to its reduction potential
- Its level decreases with age

# Vitamin C Palmitate



- Optimal form of vitamin C for topical application
- Has antioxidant, anti-aging and whitening properties
- Can also lighten the existing dark spots

# Inhibition of Melanin Production

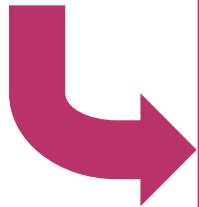


Protocol  
 Stimulation of melanocytes with a natural hormone called  $\alpha$ -Melanocyte Stimulating Hormone ( $\alpha$ -MSH)  
 Type of melanocytes: B16  
 Quantification of melanin: measure of the optical density  
 Complementary test: evaluation of cell viability by the MTT assay

S-187

# Visualization of Melanocytes

B-16 melanocytes, 20x magnified

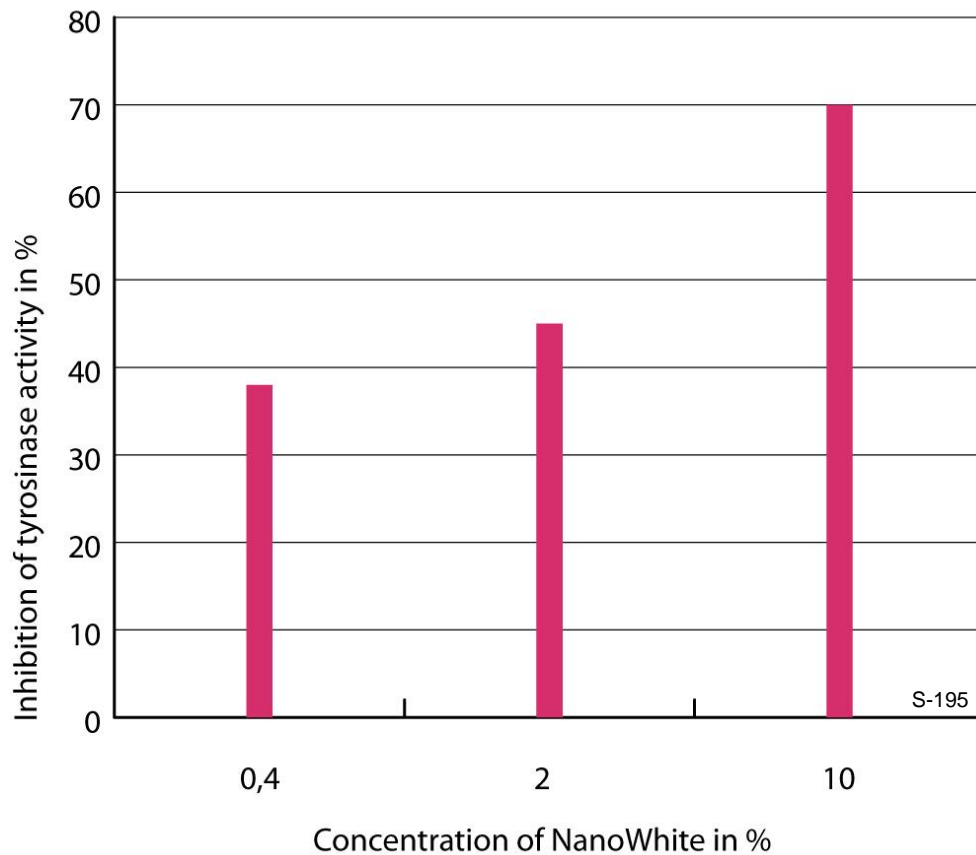


Control 2 +MSH

NanoWhite 0.40%



# Inhibition of Human Tyrosinase Activity

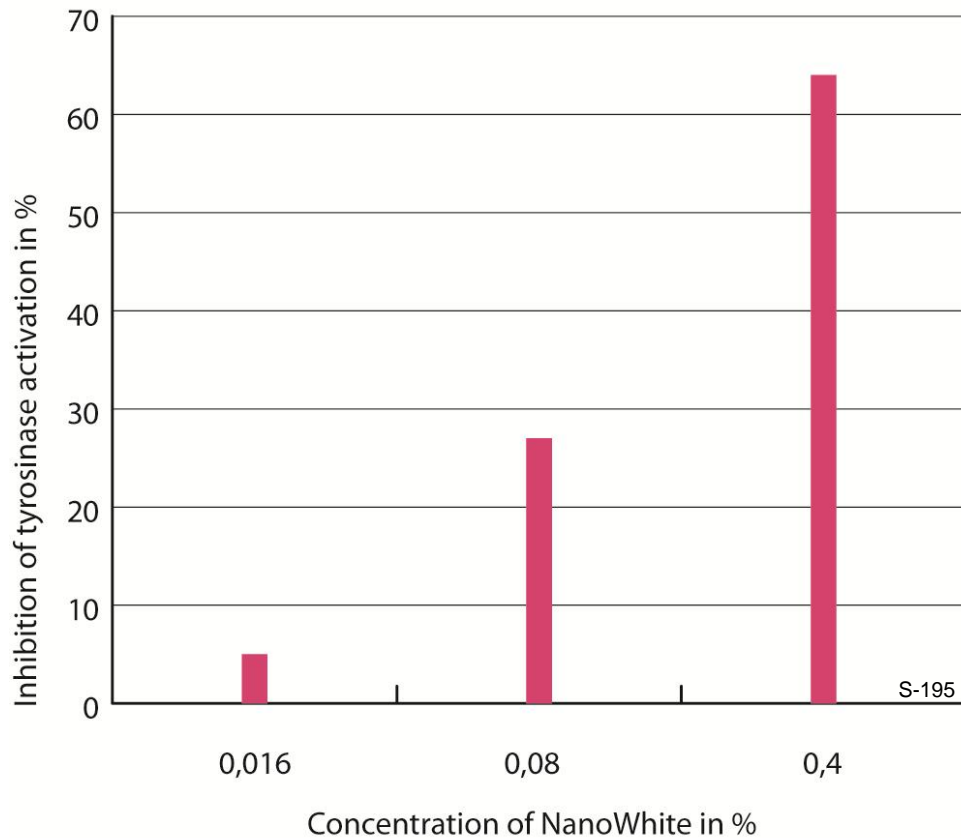


## Protocol

Tyrosinase + NanoWhite + L-DOPA /  
against controls

Quantification of tyrosinase activity:  
measure of the melanin content by  
optical density

# Influence on Melanin Formation in Cell Cultures



Protocol  
NHEM pre-treated with NanoWhite + L-DOPA / against controls  
Quantification of tyrosinase activity:  
measure of the melanin content by  
optical density

# NanoWhite Claims Ideas



- Safely inhibits the pigmentation process
- Reduces melanin synthesis
- For a luminous even skin tone

# NanoWhite Applications



**WHITENING**  
for face and body

**ANTI-AGING**  
with a uniform skin tone

**BRIGHTENING**  
for a radiant and luminous  
complexion

# NanoWhite Marketing Benefits



- Targeted action thanks to the liposomal form
- Protective properties thanks to its high content in antioxidants
- Ideal for a daily use