

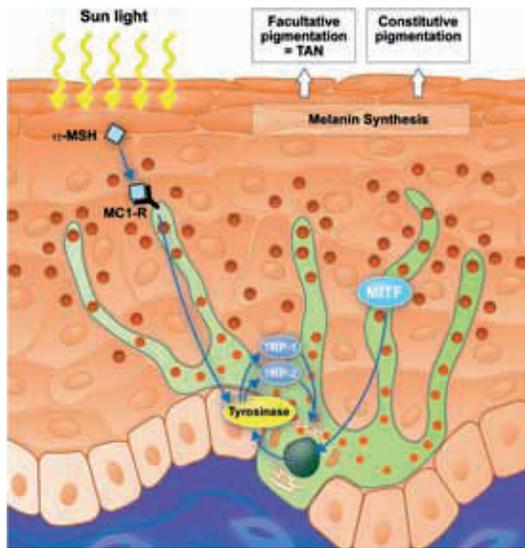
# $\beta$ -White™

**An innovative biomimetic  
encapsulated whitening peptide**

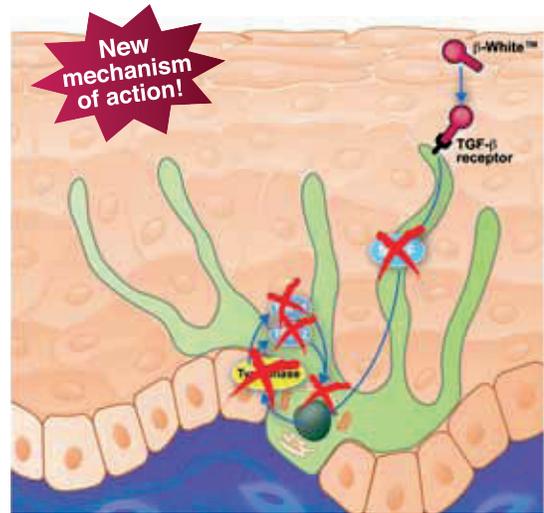
Skin color is an important attribute of beauty and is also of endless concern. Asian cultures associate lighter and even complexion with higher social status compared to Western cultures for whom a tanned complexion is associated with a healthy glow. Today's demand for skin lightening products are on the rise to achieve fairer and lighter complexion, but they are also an excellent tool to fight age-related hyperpigmentation (age spot).

Inspired by TGF- $\beta$  and MITF role in skin pigmentation, Unipex presents its innovative new whitening active called  $\beta$ -White™.  $\beta$ -White™ is a TGF- $\beta$  biomimetic peptide encapsulated in a liposome vehicle. It differentiates itself from other traditional whitening agents with its unique inhibitory action on the MITF cellular pathway to decrease **constitutive** and **facultative** pigmentation allowing optimal whitening and lightening effect with an excellent safety profile.

## MECHANISM OF ACTION



Pigmentation process

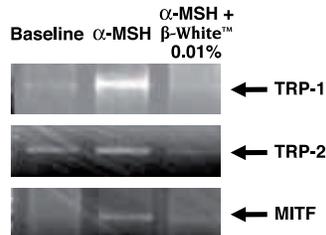


$\beta$ -White™ whitening effect

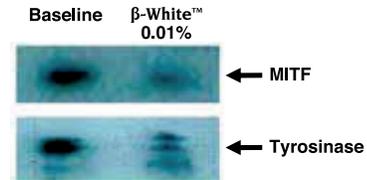
## IN VITRO EFFICACY

$\beta$ -White™ decreases proteins involved in the pigmentation process such as MITF, TRP-1, TRP-2 and tyrosinase

RT PCR analysis on melanocytes

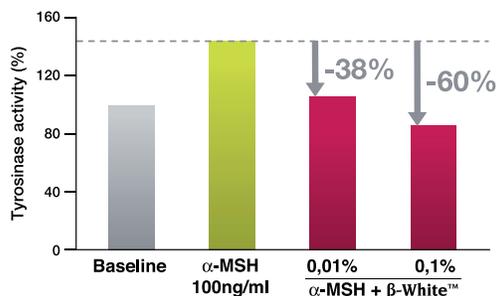


Western blot analysis on melanocytes

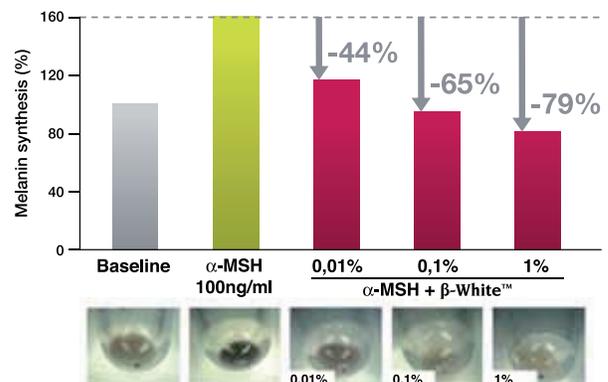


$\beta$ -White™ inhibits tyrosinase activity and melanin synthesis

Tyrosinase activity in melanocytes

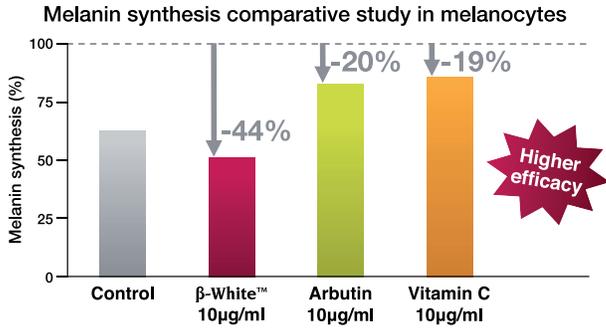


Melanin synthesis in melanocytes



$\beta$ -White™ decreases tyrosinase and melanin production for optimal whitening efficacy.

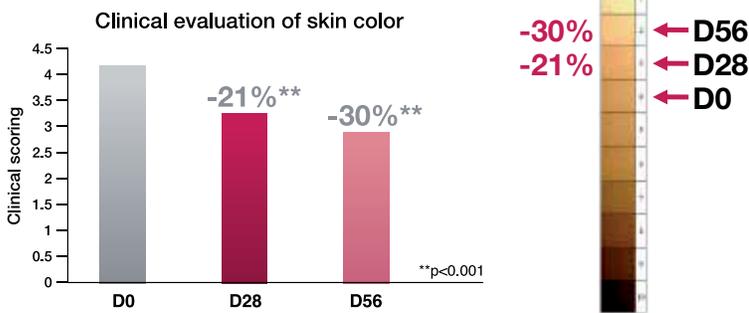
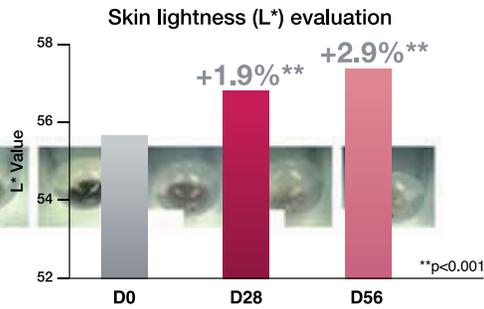
# IN VITRO EFFICACY COMPARATIVE STUDY



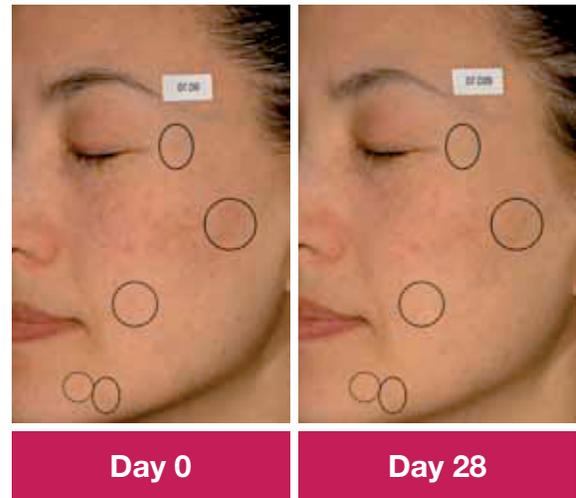
$\beta$ -White™ decreases melanin synthesis with higher activity than Arbutin and Vitamin C, 2 well-known skin whitening agents.

## CLINICAL EFFICACY

- 23 Asian volunteers presenting at least one hyper-pigmented spot (age 33 to 55)
- Application of a Cream with 5%  $\beta$ -White™, twice a day, for 56 days
- Colorimetric measurements: analysis of the colorimetric parameter (L\*) on the face
- Clinical evaluation by dermatologist investigators with a skin color scale at D0, D28 & D56
- Consumer perception at D56



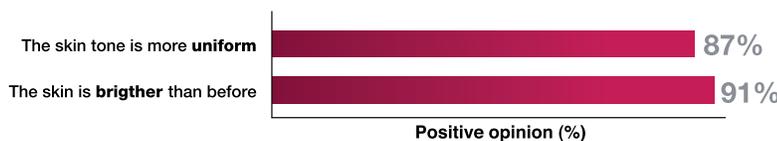
Effect on hyperpigmented spots after 28 days



$\beta$ -White™ reduces the appearance of pigmented spots.

100% of the subjects demonstrated a significant increase in skin lightness!

## Consumer evaluation



$\beta$ -White™ induces significant skin lightening effect after only 4 weeks.



# Mirror, mirror, who is the fairest of all...

## APPLICATIONS & RECOMMENDED DOSAGE

$\beta$ -White™ is a preservative free encapsulated peptide with an excellent safety profile.

The phospholipid capsule helps for optimal peptide delivery across the skin barrier and for peptide stability.

### Recommended dosage:

- Intensive whitening: 2.5 - 5%
- Corrective care & age-spot: 1 - 2.5%
- Lightening care & skin illuminator: 0.5 - 1%
- 1% if combined with an exfoliant

### Recommended pH level: 6-8

$\beta$ -White™ should be incorporated at the end of the manufacturing process, at a temperature of 35/40°C.

### Applications:

- > Whitening care
- > Skin tone evenness
- > Brightening care
- > Lightening foundation
- > Specific care: hands, armpits, décolleté
- > Age-spot treatment
- > Photo-aging
- > Anti-aging
- > Ethnic skin care



## FEATURES AND BENEFITS

### Features

Peptide



### Benefits

Stable, easy to work with

Encapsulated peptide



Enables efficient delivery and enhances skin penetration and continuous release

Unique mechanism of action



Optimum and synergistic whitening activity

High efficacy



Low dosage (starting at 0.5%)

Clinical efficacy on Asian skin



Significant lightening effect after only 28 days

Positive consumer perception



Provides a brightening effect for a more uniform complexion

## SPECIFICATIONS

### $\beta$ -White™

**INCI name:** Water (1) (and) Butylene Glycol (2) (and) Hydrogenated Lecithin (3) (and) Sodium Oleate (4) (and) Oligopeptide-68 (5) (and) Disodium EDTA (6)

**CAS:** 7732-18-5 (1), 107-88-0 (2), 92128-87-5 (3), 143-19-1 (4), 1206525-47-4 (5), 139-33-3 (6)

**EINECS:** 231-791-2 (1), 203-529-7 (2), 295-786-7 (3), 205-591-0 (4), 205-358-3 (5)

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