β-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-β and MITF role in skin pigmentation, Unipex presents its innovative new whitening active called βeta-White™. β-White™ is a TGF-β 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**

**IN VITRO EFFICACY**

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

- **RT PCR analysis on melanocytes**
  - Baseline
  - α-MSH + α-MSH + β-White™ 0.01%

- **Western blot analysis on melanocytes**
  - Baseline
  - β-White™ 0.01%

- **β-White™ inhibits tyrosinase activity and melanin synthesis**

- **Tyrosinase activity in melanocytes**
  - Baseline
  - α-MSH 100ng/ml
  - 0.01% α-MSH + β-White™
  - 0.1% α-MSH + β-White™

- **Melanin synthesis in melanocytes**
  - Baseline
  - α-MSH 100ng/ml
  - 0.01% α-MSH + β-White™
  - 0.1% α-MSH + β-White™
  - 1% α-MSH + β-White™

β-White™ decreases tyrosinase and melanin production for optimal whitening efficacy.
IN VITRO EFFICACY COMPARATIVE STUDY

Melanin synthesis comparative study in melanocytes

β-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% β-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

Skin lightness (L*) evaluation

Effect on hyperpigmented spots after 28 days

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

Consumer evaluation

The skin tone is more uniform: 87%
The skin is brighter than before: 91%
Mirror, mirror, who is the fairest of all...

APPLICATIONS & RECOMMENDED DOSAGE

β-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

β-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**

<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptide</td>
<td>Stable, easy to work with</td>
</tr>
<tr>
<td>Encapsulated peptide</td>
<td>Enables efficient delivery and enhances skin penetration and continuous release</td>
</tr>
<tr>
<td>Unique mechanism of action</td>
<td>Optimum and synergistic whitening activity</td>
</tr>
<tr>
<td>High efficacy</td>
<td>Low dosage (starting at 0.5%)</td>
</tr>
<tr>
<td>Clinical efficacy on Asian skin</td>
<td>Significant lightening effect after only 28 days</td>
</tr>
<tr>
<td>Positive consumer perception</td>
<td>Provides a brightening effect for a more uniform complexion</td>
</tr>
</tbody>
</table>

**SPECIFICATIONS**

β-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)


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