# Oligopeptide-10

**INCI name:** Oligo peptide-10

**Peptide Sequence:** FAKALKALLKALKAL-NH2

**Molecular Formula:** C_{78}H_{140}N_{20}O_{15}

**Molecular weight:** 1598.07

**Cas No.:** 466691-40-7

**Application:** Cosmetics – anti acne

**Packaging:** bottle

**Filling quantity:**
- 1 g / bottle
- 5 g / bottle
- 10 g / bottle
- 100 g / bottle
- special packaging upon request

**Storage and Shelf life:**
-20 °C cool, dark and clean
shelf life 24 months
and
+ 2 to +6°C cool, dark and clean
shelf life 12 months

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Product Spezification

Oligopeptide-10

Manufacturing date: 24.08.2018  Expiry date: 23.08.2020

<table>
<thead>
<tr>
<th>Test</th>
<th>Specification</th>
<th>Batch No. 20180824</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>white or off-white powder</td>
<td>conforms</td>
</tr>
<tr>
<td>Identity by HPLC</td>
<td>the retention is same with the reference substance</td>
<td>conforms</td>
</tr>
<tr>
<td>Identity by MS</td>
<td>1598.07 ± 1</td>
<td>conforms</td>
</tr>
<tr>
<td>Solubility</td>
<td>soluble in water</td>
<td>conforms</td>
</tr>
<tr>
<td>Amino acid composition</td>
<td>± 10 % of theoretical</td>
<td>conforms</td>
</tr>
<tr>
<td>Peptide purity (by HPLC)</td>
<td>≥ 95.0 % by area integration</td>
<td>98.8 %</td>
</tr>
<tr>
<td>Water content (Karl Fischer)</td>
<td>≤ 8.0 %</td>
<td>2.66 %</td>
</tr>
</tbody>
</table>

Characteristics

Oligopeptide-10 broad-spectrum activity against many types of organisms, including p. acne bacteria. Oligopeptide-10 is a short bioactive peptide consisting of fifteen naturally occurring amino acids that provides anti-microbial activity p-acne-bacterium. Oligopeptide-10 has potent activity against Propionibacterium acnes causing rapid cell death. It binds to negatively charged surface elements (lipoteichoic acids) of bacteria enabling access to its primary target, the cytoplasmic membrane which causes a lethal osmotic imbalance within the bacteria. Due to this unique mechanical mechanism of action bacteria have a very low probability of becoming resistant and bacteria resistant to other antibiotics remain susceptible to Oligopeptide-10. In addition, it neutralizes pro-inflammatory bacterial components, reducing redness. In independent studies Oligopeptide-10 has been shown to be non-cytotoxic, non-mutagenic, non-irritating and non-sensitizing. Solubility – water soluble; Optimum pH: 5-7. Add to the water phase of all emulsion types.

Use level: 0.001 – 0.01 %  (Oligopeptide-10 should be incorporated at the final stage of the manufacturing, provided the temperature is below 45 °C).

Cosmetic benefits

Used in many acne products to enhance natural defense systems, Oligopeptide-10 is an anti-microbial peptide derived from plant amino acids that is highly synergistic with salicylic acid. Studies have demonstrated that Oligopeptide-10 has broad-spectrum activity against many types of organisms, including p. acnes bacteria. Clinical studies have shown a significant reduction in the appearance of blemishes and red, blotchy spots after using products with Oligopeptide-10.