New Generation
Vitamin C Derivative

Et-VC™

Previously known as Corum 9515
3-O-Ethyl Ascorbic Acid

AS POTENT AS VITAMIN C
WITH BETTER STABILITY
Et-VC™
INCI: 3-O-Ethyl ascorbic acid

Also known as:
3-O-ethyl ascorbic ether
3- O-ethyl ascorbic acid

Physical Properties

- Purity > 99.0%
- White crystalline powder
- Water soluble
- Metabolized by the human body in the same manner as L- ascorbic acid (Vitamin C)
- Excellent stability

CAS: 86404-04-8
MW: 204.18
The Functions of **Et-VC™**

<table>
<thead>
<tr>
<th>Function</th>
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<tbody>
<tr>
<td>Skin lightening &amp; Balance skin tone</td>
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<tr>
<td>Reduce dark spot &amp; age spot</td>
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<tr>
<td>Anti-photoaging</td>
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<tr>
<td>Collagen synthesis</td>
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<tr>
<td>Reversing auto-oxidation</td>
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<td>Radical scavenging</td>
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<td>DNA protection</td>
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<td>Easy to penetrate the epidermis</td>
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[Image of sliced lemon and water]
Et-VC™ Efficacy Studies

- **In-vitro tyrosinase inhibition**
- Reducing activity
- **In-vitro whitening activity**
- **Ex-vivo melanin assay**
- **In-vivo whitening efficacy**

- Collagen synthesis
- Anti-photoaging
  - Anti-oxidation (radical scavenging)
  - Anti-inflammation
  - DNA protection
- Skin penetration profile
Et-VC™ Whitening Mechanism

Three melanin-generating enzymes:
1. Tyrosinase
2. TRP-2 (DOPAchrome tautomerase)
3. TRP-1 (DHICA oxidase)

- Inhibit the reaction center Cu^{+2} ion of tyrosinase
- Inhibit the activity of TRP-2
- Reduce oxidized melanin pigments

Et-VC™ Summary

- **Effective and stable** skin lightening agent
- Balance the skin tone
- Reduce dark spot
- Prevent photoaging
- Increase collagen synthesis
- Excellent anti-oxidation properties
- Scavenge radical
- DNA protection