BioCell Collagen® CG-WS
For Topical Formulations and Cosmetic Applications
Shows Dramatic Anti-aging Properties

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BioCell Collagen CG-WS is a patented, naturally-occurring complex of hydrolyzed collagen peptides and aggrecan containing glycosaminoglycans (GAGs) such as chondroitin sulfate (CS) and hyaluronic acid (HA). Collagen, CS, and HA are essential structural components in the skin dermis and responsible for the skin’s moisture, suppleness, elasticity, and beauty. These molecules degrade as we age contributing to disarray or collapse of the dermal matrix structure, resulting in dermal dehydration and eventual aged skin appearance such as fine lines, wrinkles and superficial sagging.

**Properties:**
- BioCell Collagen CG-WS has strong hyaluronidase inhibition
- BioCell Collagen CG-WS protects HA from degradation
- BioCell Collagen CG-WS provides collagen peptides and hyaluronic acid.

HA level in the skin is maintained by the balance of HA synthases and hyaluronidases. Aging is associated with heightened hyaluronidase activity which accelerates HA breakdown contributing to skin aging process.

**Function:**
- Maintains skin moisture and elasticity
- Improves skin suppleness
- Protects the skin extracellular matrix and collagen network

**Cosmetic Applications:**
- Anti-Aging products
- Regenerative products
- Moisturizing products
- Oil-free hydrating products
- Products marketed as "natural"

**Suggested Concentration:**
For skin care preparations we recommend the addition 3 - 6% of BioCell Collagen CG-WS.

**Efficacy:**
In particular, HA is critical for skin volume and turgidity because HA is responsible for retaining water in the dermis, and HA loss leads to skin dehydration in association with both natural aging and extrinsic aging (i.e. photoaging) processes. The aging effect of HA loss can be antagonized by BioCell Collagen due to its HA content and ability of inhibiting hyaluronidase.

**Dermatologist Reviewed:**
- Non-irritating
- Clinically tested
- Allergy tested
- Non-cytotoxic

**Formulation:**
BioCell Collagen CG-WS should be processed below 40 °C and is incorporated into the aqueous phase of a cosmetic formulation.

**Typical Analysis**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Appearance</td>
<td>Slightly Viscous Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Transparent Yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic</td>
</tr>
<tr>
<td>PH</td>
<td>3.7 - 4.5</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water Soluble</td>
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</tbody>
</table>

**Microbiological**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Plate Count</td>
<td>&lt;3,000 CFU/g</td>
</tr>
<tr>
<td>Yeast And Mold</td>
<td>&lt;500 CFU/g</td>
</tr>
<tr>
<td>E. Coli</td>
<td>Negative</td>
</tr>
<tr>
<td>Salmonella</td>
<td>Negative</td>
</tr>
</tbody>
</table>

* FDA-code (A = > 50%, B = 25-50%, C = 10-25%, D = 5-10%, E = 1-5%, F = 0.1-1%, G = < 0.1%)

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