

TECHNICAL DATA SHEET

Product name: HerbaCell Orange HA

INCI name: Water, Glycerin, Citrus Aurantium Dulcis (Orange) Peel Extract, Sodium Hyaluronate, Vitamin C (3-O-Ethyl Ascorbic Acid), Niacinamide, Tocopherol (Vitamin E), Panthenol (Provitamin B5), Pentylene Glycol, Phenoxyethanol (and) Ethylhexylglycerin

CAS: 7732-18-5, 56-81-5, 8028-48-6, 9067-32-7, 86404-04-8, 98-92-0, 59-02-9, 81-13-0, 5343-92-0, 122-99-6, 70445-33-9

Chemical classification: Complex of aqueous-glycerin and bioactive antioxidants combined with ultra-low-molecular-weight hyaluronic acid and vitamins C, E and B3.

Functional category: Anti-age and antioxidant active complex; moisturizing, regenerating and brightening action.

IUPAC name: Sodium hyaluronate: Sodium (2S,3S,4S,5R,6R)-6-[(2-acetamido-2-deoxy-β-D-glucopyranosyl)oxy]-3,4,5-trihydroxyoxane-2-carboxylate

Description: Orange Cell Active HA 1 kDa is an advanced cosmetic complex intended for formulations that are specifically designed to target skin aging and loss of elasticity. It combines a cell extract of sweet orange peel (Citrus Aurantium Dulcis) with low-molecular-weight sodium hyaluronate (1 kDa), achieving a synergistic effect between natural antioxidants and deep-acting moisturizing polymers. The orange peel extract is rich in flavonoids, phenolic acids, and vitamin C, which together protect cells from oxidative stress and restore the epidermal barrier. The small-molecule hyaluronate penetrates deeper into the epidermis, binds moisture, and increases skin density and elasticity while enhancing its ability to retain water. The formulation has a light texture, is fully water-soluble, and remains stable within a pH range of 4.5 – 6.0, allowing easy incorporation into serums, emulgels, and toners. The combination of orange bioactives and hyaluronic acid revitalizes the skin, reduces fine lines, and promotes an even, radiant complexion. Due to its mild and non-irritating composition, it is suitable for sensitive areas such as the region around the eyes. This ingredient is designed for professional formulations seeking to combine natural bioactivity with high dermocompatibility, and it serves as a multifunctional active for anti-age, moisturizing, and regenerative cosmetic lines.

Disclaimer: The details provided here are specific to the identified material and may not remain accurate if that material is combined with other substances or used in different processes. The information presented is, to the best of the company's knowledge, considered precise and trustworthy as of the date mentioned. However, the company does not make any explicit or implied assurance, guarantee, or claim regarding the information's precision, trustworthiness, or comprehensiveness, and will not be held accountable for any losses, damages, or costs, whether direct or indirect, that arise from its use. Users are encouraged to independently verify the appropriateness and thoroughness of this information for their specific purposes.

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Note: The term "Cell Active" refers to a plant-cell active an extract obtained by ultrasonic cavitation that releases the intracellular content of plant cells while "Hyaluronate 1 kDa" indicates a low-molecular-weight hyaluronic acid intended for deep hydration and anti-aging performance.

Mechanism of Action: The activity of the complex is based on the synergy of active substances acting simultaneously on oxidative stress, cell regeneration, collagen synthesis, and maintenance of the skin's hydrolipid barrier. The sweet orange peel extract is rich in bioflavonoids such as hesperidin and narirutin, which exhibit antioxidant and anti-inflammatory effects. They neutralize free radicals, prevent lipid peroxidation, and inhibit enzymes responsible for collagen and elastin degradation, thereby slowing down skin sagging and signs of photoaging. The vitamin C derivative (3-O-Ethyl Ascorbic Acid) is stable in aqueous formulations and easily penetrates the epidermis, where it stimulates the synthesis of type I and III collagen, regulates melanogenesis, and evens out skin tone. Its antioxidant action is further enhanced by vitamin E (Tocopherol), a lipophilic antioxidant that protects cell membranes from oxidative damage. These two vitamins act synergistically vitamin C regenerates the oxidized form of vitamin E, prolonging its antioxidant capacity. Niacinamide (vitamin B3) improves the skin's barrier function, increases ceramide synthesis, and reduces transepidermal water loss. It also modulates inflammation and minimizes hyperpigmentation, promoting an even, resilient complexion. Panthenol (provitamin B5) soothes irritation, promotes epithelial regeneration, and enhances skin elasticity and lipid synthesis. Sodium Hyaluronate 1 kDa, due to its low molecular weight, penetrates into deeper epidermal layers, acting as a powerful humectant that binds and retains water, increases cell volume, and indirectly stimulates fibroblast activity resulting in firmer, more hydrated, and elastic skin. The combined action of these components maintains an optimal balance of hydration, antioxidant protection, and cellular metabolism, producing visible improvements in skin tone, texture, and vitality.

Benefits:

- Sweet orange peel extract provides antioxidant protection and defends skin cells from oxidative stress.
- Vitamin C (3-O-Ethyl Ascorbic Acid) stimulates collagen synthesis and brightens the complexion.

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- Vitamin E (Tocopherol) protects cell membranes and enhances the skin's antioxidant defense.
- Niacinamide strengthens the skin barrier, reduces hyperpigmentation, and improves elasticity.
- Panthenol soothes irritation and accelerates epidermal regeneration.
- Sodium Hyaluronate 1 kDa delivers deep hydration and increases skin elasticity.

Usage: Orange Cell Active HA 1 kDa is a multifunctional ingredient added during the final phase of formulation, at temperatures below 40 °C, to preserve the stability of vitamins C, E, and B3. It is used at 2–5 % in aqueous and gel formulations and up to 10 % in emulsions, serums, and creams, depending on the desired intensity of the anti-aging effect. Suitable for day and night creams, serums, toning lotions, and emulgels, as well as for sensitive areas such as the region around the eyes. The optimal pH of the final product should be between 4.5 and 6.0, ensuring vitamin stability and antioxidant synergy. It can be combined with peptides to enhance regeneration, while formulations with strong acids or high alcohol content should be avoided.

Origin: Natural or Synthetic. Orange Cell Active HA 1 kDa is a natural-synthetic complex, combining natural and biotechnologically derived ingredients. The sweet orange cell extract originates from natural plant material, while hyaluronate (obtained through biotechnological fermentation) and vitamins C, E, B3, and provitamin B5 are synthetic or semi-synthetic derivatives of natural molecules. This combination provides high efficacy, stability, and dermocompatibility while preserving the natural origin of most of the formulation.

Animal Testing: In accordance with EU Regulation (EC) No. 1223/2009 on cosmetic products, this substance has not been tested on animals. Its safety assessment is based on available toxicological data, scientific literature, and validated alternative testing methods (in vitro and in silico). The term in silico refers to testing and evaluation methods performed using computer models and simulations, rather than on living organisms (in vivo) or cell cultures (in vitro). This note confirms compliance with the animal-testing ban and is provided solely for informational purposes for further use of the raw material in cosmetic formulations.

GMO: Not GMO

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Vegan: Contains no animal-derived components

Stability and Storage: Store in a tightly closed container at 15–25 °C, protected from direct light and heat sources.

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