Import and distribution for Serbia: Farmadria DOO
info@avenalab.com
+381 (0) 69 / 55 65 029
www.avenalab.com

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Product Name: Palmitoyl Tripeptide-38

INCI Name: Glycerin, Water, Hydroxypropyl Cyclodextrin, Palmitoyl Tripeptide-38, Gluconolactone, Sodium Benzoate

CAS: 56-81-5, 7732-18-5, 1447824-23-8, 1101175-36-3, 90-80-2, 532-32-1

Synonyms: Matrixyl Synthe 6; Matrixyl synthe'6; N-palmitoyl-L-lysyl-S,S-dioxo-L-methionyl-L-lysine; N2-(1-Oxohexadecyl)-L-lysyl-S,S-dioxido-L-methionyl-L-lysine

Sequence: Pal-Lys-Met(O2)-Lys-OH

Chemical Classification: Mixture/Peptides

Functional Category: Skin and Hair Conditioning Agent, Sunscreen Agent, Denaturant, Chelating Agent/Sequestrant

IUPAC Name: ((S)-2-((S)-6-amino-2-palmitamidohexanamido)-4-(methylsulfonyl)butanoyl)-L-lysine

Chemical-Physical Properties: Palmitoyl Tripeptide-38 is a synthetic molecule. It is synthesized in laboratory conditions with the aim of enhancing certain biological processes in the skin, such as stimulating collagen and hyaluronic acid synthesis. The molecule consists of palmitic acid attached to a tripeptide chain. Palmitic acid is covalently bonded to the amino group of the first lysine via an amide bond, forming the palmitoyl group. Palmitic acid represents the hydrophobic part of the molecule, increasing its lipophilicity and enabling better penetration of the tripeptide into the skin. The tripeptide, which acts as the active part of the molecule, consists of three amino acids in the following sequence: Lysine (Lys), Lysine (Lys), Serine (Ser). Each of these amino acids has specific functional groups that play an important role in the molecule's structure and function. The first Lysine (Lys) is an essential amino acid with a positively charged side chain, as is the second lysine. Serine is a non-essential amino acid with a hydroxyl group in the side chain. Lysine amino acids allow the formation of stable peptide bonds, while serine with its hydroxyl group increases the molecule's polarity and hydration. Thanks to its specific chemical structure, essentially the sequence: Pal-Lys-Met(O2)-Lys-OH, Palmitoyl Tripeptide-38 stimulates collagen and hyaluronic acid synthesis, improving skin

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elasticity and reducing the appearance of wrinkles. In its basic form, it appears as a white to pale yellow powder. It is soluble in ethylene glycol. It is stable at a pH range of 3.0 to 6.0. Peptide content: 200-270 ppm (HPLC). Clear liquid, odorless, water-soluble. The product is preserved with gluconolactone and sodium benzoate.

Effects on Skin: Palmitoyl Tripeptide-38 is derived from the tripeptide KMK, naturally found in collagen VI and laminin. In vitro studies have shown that it exhibits a matrikine-like effect, stimulating the synthesis of six major proteins: collagen I, II, IV, fibronectin, hyaluronic acid, and laminin 5. Palmitoyl Tripeptide-38 binds to cell receptors and affects a range of physiological processes. To exert its effects, it needs to pass through the cutaneous barrier to reach the viable epidermis (keratinocytes), basal layer (melanocytes, nerve endings), dermis (fibroblasts), and even hypodermis (adipocytes). It stimulates the synthesis of collagen, elastin, proteoglycans, and glycosaminoglycans. It is chemically pure, biodegradable, non-toxic, and suitable for innovations. Its lifespan is short as it is degraded by proteolytic enzymes. This characteristic makes it a very safe and effective cosmetic active ingredient.

Benefits:

- ***Anti-Age Effect:*** Palmitoyl Tripeptide-38 is known for its anti-aging properties. It can help reduce the visibility of fine lines and wrinkles by promoting collagen production in the skin.
- ***Skin Firming Effect:*** This peptide can improve skin firmness and elasticity, leading to a younger and more toned appearance. It helps restore skin structure.
- ***Skin Hydration:*** Palmitoyl Tripeptide-38 can enhance the skin's natural ability to retain moisture. Well-hydrated skin appears plumper and healthier.
- ***Reduction of Age Spots:*** Some research suggests that Palmitoyl Tripeptide-38 may help reduce the visibility of age spots and hyperpigmentation.
- ***Skin Regeneration:*** It can support the skin's natural regeneration mechanisms, aiding in the recovery of damaged skin.
- ***UV Protection:*** Palmitoyl Tripeptide-38 may provide some level of protection against the harmful effects of UV radiation by strengthening the skin's natural barrier.

Usage: Add to the aqueous phase of the formulation. Typical concentrations used are between 2% and 4%.

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Applications: Anti-aging and anti-wrinkle face creams and serums. It can be combined with other agents in anti-aging products. Used in cosmetic products as a skin moisturizer. Store in a refrigerator. For external use only.

Source Raw Materials: Amino acids (lysine and methionine sulfone)

Production Method: Palmitoyl Tripeptide-38 is synthetically produced from lysine and methionine sulfone amino acids.

Animal Testing: The substance has not been tested on animals.

GMO: Not GMO

Vegan: Does not contain animal-derived components

Raw Material Origin: USA