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TECHNICAL DATA SHEET

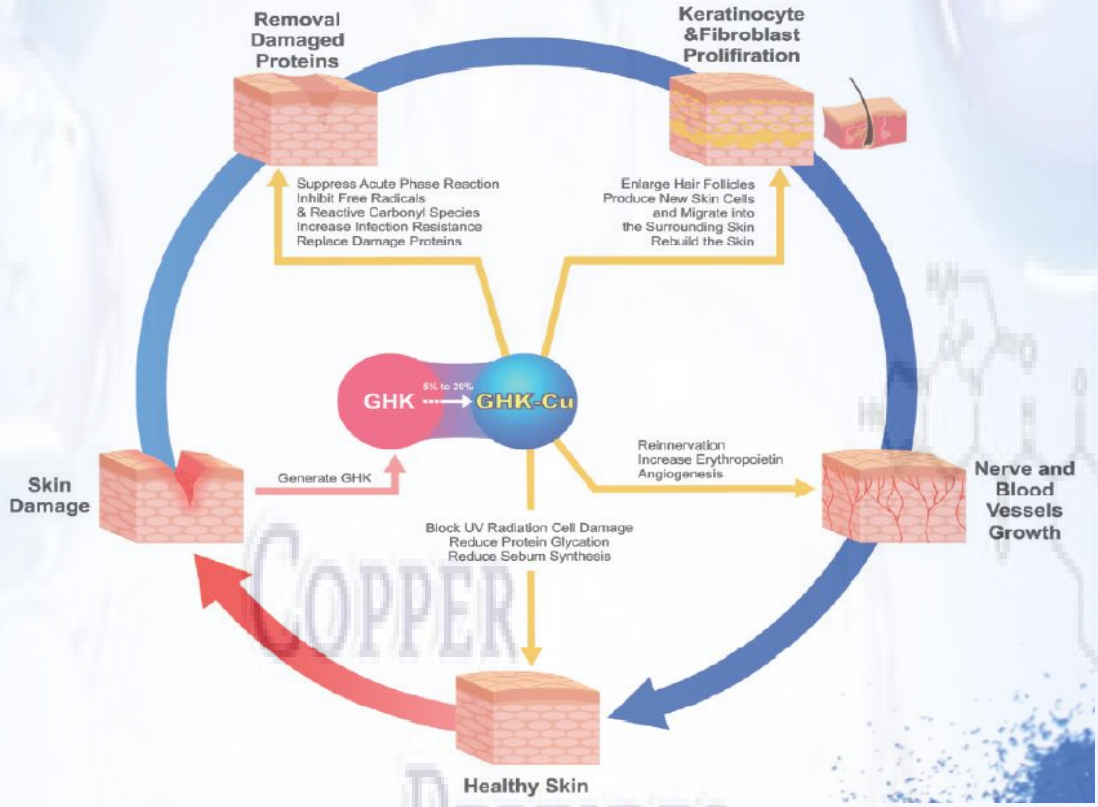
INCI name: Copper Tripeptide-1
Catalog No.: MCP 012
Synonyms: Copper peptide, $(GHK)_2$-Cu,GHK-Cu,AHK-CU
Sequence: (Gly-His-Lys)2.Cu.Hac
Molecular Formula: C14H24N6O4
Molecular weight: 340.5
Cas No.: 89030-95-5

Characteristics:

Copper is an important trace element that has been found to be important in wound healing and enzymatic processes. Lysyloxidase is an important enzyme in collagen and elastin production and it is dependent upon the action of copper. Tyrosinase and cytochrome c oxidase require copper as well. The detrimental effects of free radicals on the skin have been elucidated in basic science research into skin photo-aging. Superoxide dismutase acts as an important antioxidant and requires copper as a cofactor. The peptide GHK spontaneously complexes with copper and facilitates the uptake of copper by cells. This peptide sequence is found in proteins of the extracellular matrix such as the α-chain of collagen, and it is believed to be released during wounding and inflammation. A feedback stimulation of collagen repair has also been proposed for this peptide, but the main benefit to photo-aged skin is believed to be the enhanced delivery of copper.

Our Copper Tripeptide-1 are used for wound healing (Iamin, BioHeal), skin renewal (Blue Copper, Neova, Neutrogena copper, P&R), and hair growth (Tricomin, Graftcyte).

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Cosmetic benefits:

1. Regenerate new collagen and elastin which improve skin firmness and elasticity.
2. Increase the production of water-holding glycosaminoglycans which are true moisturization.
3. Improve the skin's blood vessel microcirculation, help hair growth
4. Produce biochemical energy from nutrients in the body's blood supply.
5. Increase the natural defense mechanism against oxidative damage, and repair damage to the protective skin barrier. As the skin is rebuilt and scars removed, the elastic properties of the skin pull it into a smooth surface.

Specification:

Appearance:	Blue powder
Identity by MS (GHK):	340.5±1.0
Purity (HPLC) (GHK):	Not less than 98.0%
Water (K.F.):	Not more than 8.0%
Cu2+ content:	4% ~ 8%
Amino acid composition:	±10% of theoretical

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Usage and Dosage:

Copper Tripeptide-1 can be incorporated in anti-aging/skin repair and hair care formulations at the final stage of the manufacturing product, provided the temperature is below 45℃.

Copper Tripeptide-1 can't be formulated with chelating agent and strong reducibility materials.

Recommended use level: 0.5 % - 1% for Copper Tripeptide -1 powder.
or adjusted level according to own brand prescription

Solubility:

Water soluble; Optimum pH: 5-7

Storage and Shelf life:

Copper Tripeptide-1 powder must be kept in a sealed container at cool, dark and clean place to ensure a shelf life of at least 24 months.

Packing:

Copper Tripeptide-1 powder : 1g/bottle ,20g/bottle, 100g/bottle, 1000g/bottle