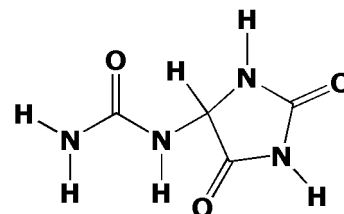


Allantoin

INCI name: Allantoin

CAS n°: 97-59-6



Appearance: Fine white powder

Description

Allantoin is a skin active ingredient with keratolytic, moisturizing, soothing, anti-irritant properties, promotes the renewal of epidermal cell and accelerates wounds healing.

Allantoin is safe and non-irritant, highly compatible with the skin and with cosmetic raw materials. Allantoin enjoys a long history of use in cosmetics and topical pharmaceuticals with no findings of toxicity or adverse reactions. Comply with CTFA and JSCI requirements.

Mode of action

The beneficial effects on the skin of Allantoin were well documented. Allantoin is a mild **keratolytic** agent that dissolves the intercellular cement that holds the cornified cells together, helping the natural desquamation of stratum corneum and increasing skin smoothness.

The **moisturizing** effect results from its ability to increase the water bounded to the intercellular matrix and keratin, thereby softening skin and making the skin look healthier.

The **soothing, anti-irritant** and **skin protectant** effect is due to the ability of Allantoin to form complexes and neutralize many irritant and sensitizing agents.

Allantoin enhances epidermal **cell-proliferation**, promotes the regeneration of damaged epitelium and accelerates **wound healing**.

Origin

Allantoin is a metabolic intermediate of a wide variety of organisms: from bacteria, to vegetals and animals.

Allantoin was found in many plants, and particularly in the leaves and roots of comfrey (*Symphytum officinale*), an herb of family *Boraginaceae*. The roots and leaves of this herb contain from 0.6 to 1% Allantoin and have a long history of use in the treatment of wounds in form of poultices and decoctions.

Allantoin is the end product of purine degradation in Mammalians (except Primates) and derives from the oxidation of uric acid.

Allantoin can't be extracted from animals with industrial advantages, thus all internet alerts on the animal origin of Allantoin are completely unsubstantiated. Allantoin CTFA manufactured by Akema is the natural-identical compound fully obtained via a chemical process that make no use of substances of animal origin.

Properties and stability

Allantoin is a heterocyclic compound derived from purine. It is an odourless white powder, soluble in water to 0.5%, very slightly soluble in alcohols, insoluble in oils and apolar solvents. Allantoin is stable in the pH range 3-8 and to 80°C prolonged heating. It is fully compatible with cosmetic ingredients and with anionic, non-ionic, cationic systems.

Applications

Allantoin is suitable for any personal care application. Its use notably increases the performance of every cosmetic preparation: used at low levels on intact skin gives a smooth and healthy appearance; used on irritated, chapped and cracked skin provide relief from pain and promote healing. Allantoin is also useful as only active ingredient.

The many cosmetic applications include:

- **Body and face care:** tonics, gels, creams, lotions, wipes.
- **Hand-care:** gels, lotions, creams.
- **Shaving-care:** shaving soaps, aftershaves, gels, lotions, creams.
- **Baby-care:** diaper rash, bath products, gels, lotions, creams, powders, wipes.
- **Lips-care:** sticks, creams.
- **Sun-care:** sunscreens, aftersuns, suntans, gels, lotions, creams.
- **Hair products:** shampoos, tonics.
- **Bath products:** shower gels, bubble baths, intimate, powders, wipes.
- **Oral preparations:** toothpastes, mouthwashes.

Use levels

The typical use of allantoin is between 0.1-0.5%, but may be increased upto 2%. Allantoin can be easily dissolved in aqueous formulations at room temperature upto 0.5%. It can be incorporated in emulsions at 0.5-2% with temperature over 50°C.

Technical support

For further information, documentation and sample please contact us.