Import and distribution for Serbia: Farmadria DOO
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TECHNICAL DATA SHEET

Product name: Lactic Acid

INCI name: Lactic Acid

CAS: 50-21-5

Chemical classification: Carboxylic acid/derivative

Functional category: Skin care agent, Exfoliant/peeling agent

IUPAC name: 2-Hydroxypropanoic acid

Country of origin: China

Description: Lactic acid is an Alpha-hydroxy acid (or AHA). It dissolves in water and alcohol and is hygroscopic. The lactic acid molecule is chiral and can have two optical isomers (L and D forms), with the biologically significant form being L. Colorless to pale yellow, viscous liquid with a characteristic odor. Lactic acid concentration ≥ 80%. pH value 0.5-1.

Benefits:

- ***Exfoliation:*** Lactic acid helps in removing dead cells from the skin surface. It improves skin texture and reduces the visibility of fine lines and wrinkles.
- ***Hydration:*** Unlike some other exfoliants, lactic acid helps retain moisture in the skin, making it softer and more hydrated.
- ***Reduction of hyperpigmentation:*** (L+) lactic acid and its salts, lactates, prevent the formation of tyrosinase, a key enzyme in melanin synthesis. Regular use of products containing lactic acid can help reduce the appearance of sun spots, age spots, and other forms of hyperpigmentation.
- ***Improvement of skin barrier function:*** Lactic acid can help strengthen the skin's natural barrier, reduce moisture loss, and improve skin resistance to harmful external influences. It possesses broad-spectrum antimicrobial activity.
- ***Sensitivity and irritation:*** Although generally considered safe for most skin types, lactic acid can cause irritation in individuals with extremely sensitive skin. Gradual introduction and use of products in lower concentrations are recommended.

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Usage in cosmetic products: According to European regulations, the maximum concentrations of AHA for personal use are 10%, which is also a requirement of the FDA (Food and Drug Administration). When used in concentrations up to 10%, in the final product with a pH ≥3.5% lactic acid, as well as its salts and simple esters, are considered safe cosmetic active substances. For professional use, it is safe in concentrations ≤30%, at product pH values ≥3, and for short-term interventions performed by professionals, after which it is rinsed off the skin (recommendations by Cosmetic Ingredient Review - CIR). Due to the exfoliating effect, skin hypersensitivity may occur when exposed to sunlight, so simultaneous use of sunscreen products or application during autumn and winter months is recommended. It is used in exfoliating products, creams, lotions, masks, cleansing agents. Due to its acidity, products with lactic acid must be tested for pH. The optimal pH ranges between 3.5-5.0. In some products, after adding lactic acid, phases may separate as a result of the low pH, so such systems should be stabilized.

Note: Should not be used pure and undiluted. The solution has a low pH, is acidic, and can lead to skin irritation and burns.

Raw materials from which it is obtained: Yogurt, sour milk

Obtaining: Obtained by the fermentation of lactose by the action of lactic acid bacteria. Mainly obtained from lactic acid products

Animal testing: The substance has not been tested on animals

GMO: Not GMO