

Product: Lactic Acid 88%

INCI: **Lactic Acid 88% / Distilled water 12%**

Derived from: fermented sour milk

Physical form: Liquid, clear to slightly yellow

Solubility: water

Specific Gravity: 1.2

Melting Point: N/A

MSDS/CoA:

Properties/Attributes:

- A. lactic acid is milder than glycolic acid and applicable to those who are too sensitive to use the glycolic acids
- B. helps to diminish fine lines, reduce pore size, smooth out skin texture

How does it work?

Alpha-hydroxy acids are naturally occurring acids. Lactic acid is derived from the fermentation of sour milk. This acid helps to dissolve the "glue" that holds the keratinized skin cells together and increases cell exfoliation and replacement. Lactic acid is a natural humectant, which holds water in the upper layers of the skin increasing the skin's moisture.

**Noted under Glycolic Acid:**

Alpha-hydroxy acids are naturally occurring acids, derived from the sugars in particular plants. Some examples are Glycolic Acid (Sugar Cane), Lactic Acid (Milk), Tartaric Acid (Grapes), Citric Acid (Citrus Fruits), Malic Acid (Apples), and Mandelic Acid (Bitter Almonds). These acids work at the very base of the stratum corneum, dissolving the cement that holds dead skin cells together. This increases cell turnover and influences the structure of new stratum corneum being made. This results in skin that is more flexible, more smooth, and more even in tone. At greater concentrations (12%-20%), deeper dermal effects, such as higher amounts of mucopolysaccharides and collagen and increased skin thickness, are observed. Eventually, alpha hydroxy acids will produce skin that is softer, smoother, less wrinkled, less dehydrated, and more even in skin tone.

Application: topical

Formula/Recipe:

### Lactic Acid Toner [10% final strength]

<u>Total End Product:</u>		<u>4 ounces</u>	<u>120 grams</u>
Lactic Acid 88%	11.5%	.46 oz	13.8 grams
Hyaluronic Acid 1%	50 %	2 oz	60 grams
Distilled water	38 %	1.52 oz	45.6 grams
<u>Optiphen</u>	<u>.5 %</u>	<u>.02 oz</u>	<u>.6 grams</u>
Total	100%	100%	100%

Adjust the Ph of the final product with Baking Soda to between 2.5 and 3.5.

The math formula used for this is:

120 grams or 4 oz x 10% (final strength) divided by 88% (strength of acid)  
equals 13.8 grams or .46 ounce (these can be rounded to make formulating easier)

**NOTE:** do not use with Rosacea without knowing the possible consequences

#### Sources:

Epidermal and dermal effects of topical lactic acid

Long term topical application of lactic acid/lactate lotion as a preventive treatment for acne vulgaris

### Safety Precautions:

- DO NOT breathe vapors
- DO NOT get in eyes, on skin, or on clothing
- Keep container closed and out of the Reach of Children
- Use adequate ventilation when formulating
- Wash thoroughly after using
- Wear impervious protective clothing, including boots, gloves, lab coat, apron, chemical safety goggles and a full face shield