

ACB Fruit Mix



AHAs Transformed the Modern Cosmetic Market

Feel and See Results!

- smoother + brighter complexion

immediately

exfoliating, moisturizing

decreased

appearance of wrinkles

BACKGROUND

Alpha Hydroxy Acids transformed the modern cosmetic market. Instead of relying on statistics, consumers could literally feel and see an immediate difference in their skin – a smooth, brighter complexion with a diminished appearance of unwanted wrinkles. **ACB Fruit Mix** contains natural Alpha Hydroxy Acids (AHAs). This product is capable of improving moisturization while simultaneously increasing the production of structural components, such as collagen and glycosaminoglycan, as well as reversing cutaneous atrophy. **ACB Fruit Mix** is the way to smooth, wrinkle-free skin, truly revealing a rejuvenated complexion!

A contributing factor to AHA efficacy is its differentiation from other organic acids. AHAs have a hydroxyl (OH) group in the alpha position that is relative to the carboxyl (COOH) group. Theories for the mechanism of AHA-activity range from the sequestration of Ca²⁺ and the associated disruption of divalent metal cation-dependent cell adhesion molecules to the roles of AHAs as intermediates in a variety of metabolic pathways¹. **ACB Fruit Mix** will work to help brighten skin, shed the dullness, and deliver much needed therapeutic benefits so you can shine.

The topical use of AHAs dates back to the beginning of recorded history. Traditional skin care treatments for softening skin have included milk and lemon juice, both of which contain AHAs. Since then, products comprised of AHAs have become widely used in cosmetics. Consumer attention was first captured when AHA products incorporating fruit and sugar derivatives were initially marketed towards acne treatments, anti-aging products and hyperpigmentation applications. From capabilities such as smoothing fine lines to help minimize the appearance of wrinkles, AHAs are favored for improving skin tone and condition, while enhancing overall texture.

Code Number: 20343LNZ

INCI Name: Water & Vaccinium Myrtillus Fruit Extract & Saccharum Officinarum (Sugar Cane) Extract & Citrus Aurantium Dulcis (Orange) Fruit Extract & Citrus Limon (Lemon) Fruit Extract & Acer Saccharum (Sugar Maple) Extract

INCI Status: Conforms

REACH Status: Compliant

CAS Number: 7732-18-5 & 84082-34-8 & 91722-22-4 & 8028-48-6 (or) 84012-28-2 & 84929-31-7 & 91770-22-8

EINECS Number: 231-791-2 & 281-983-5 & 294-424-5 & 232-433-8 & 284-515-8 & 294-807-7

Origin: Botanical

Processing:

- GMO Free
- No Ethoxylation
- No Irradiation
- No Sulphonation

Additives:

- Preservatives: None
- Antioxidants: None
- Other additives: None

Solvents Used: Water

Appearance: Clear, Colorless to Pale Yellow Liquid

Soluble/ Miscible: Water Soluble

Microbial Count: < 100opg, No Pathogens

Suggested Use Levels: 1.0 – 10.0%

Suggested Applications:

- Exfoliation, Problem Skin, Enhance Cellular Renewal

Benefits of **ACB Fruit Mix:**

- Immediately Perceivable Results
- Excellent for Problem Skin
- Increases Rate of Cellular Renewal
- Moisturizing
- Decreases Appearance of Wrinkles

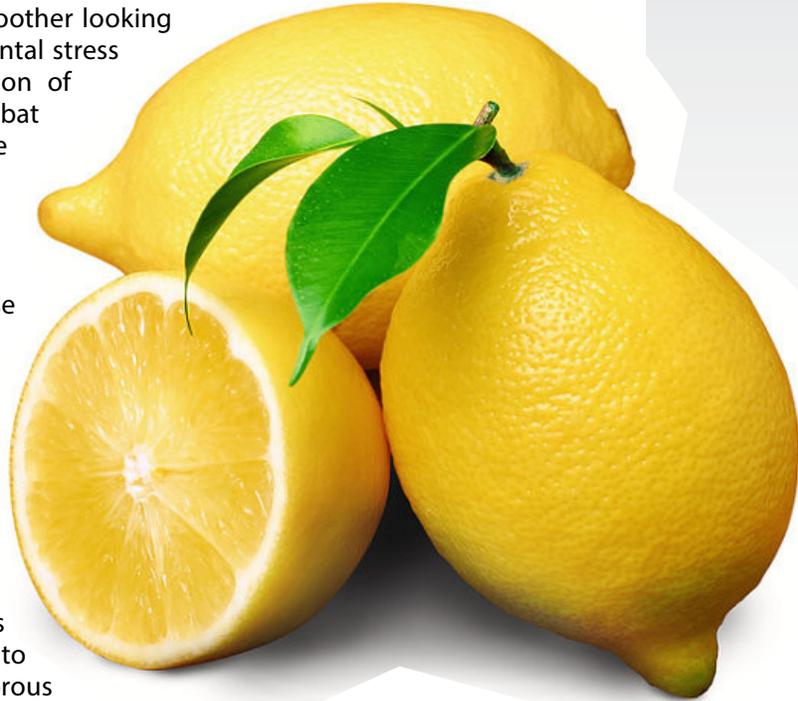
ACB Fruit Mix

SCIENCE

ACB Fruit Mix is based on a standardized extraction of five plant species: Bilberry, Sugar Cane, Orange, Lemon, and Sugar Maple. These botanical extracts deliver five natural AHAs to the skin: Lactic Acid (from Bilberry), Glycolic Acid (from Sugar Cane), Citric Acid (from Orange and Lemon), and Malic and Tartaric Acids (from Sugar Maple). These AHAs are commonly used to treat skin conditions such as rough skin, surface wrinkles and fine lines. Recognized for having exfoliating properties, AHAs leave the skin with a smooth and radiant appearance.

Glycolic acid, the smallest molecular structure of the group, has proved effective in cosmetics due to its ability to reach the deeper layers of the skin, thus making it an excellent exfoliating agent that provides immediate skin softening effects. Glycolic acid loosens corneocyte attachments and reduces cell cohesion at the lower level of the stratum corneum to promote cellular renewal. As new skin cells generate, older cells slough off to reveal smoother looking skin. Factors such as sun damage, age and environmental stress slow down this process which results in the accumulation of dead skin cells. The use of alpha-hydroxy acids can combat the problem by breaking proteolytic bonds to increase cellular renewal². Moreover, glycolic acid allows the capillaries to dilate and deliver more oxygen and energy to the cells for increased intracellular efficiency. In addition to increasing collagen and glycosaminoglycan (GAG) synthesis, Glycolic acid treatments also increase type I collagen mRNA and hyaluronic acid content of human skin³.

Lactic acid is an excellent moisturizing ingredient and beneficial for most hyper-proliferate skin conditions. One of the key benefits for using lactic acid in anti-aging applications is that research has also shown it is capable of reversing cutaneous atrophy. This will help thicken the skin to create a more youthful aesthetic. Citric acid is an intermediate in the Krebs cycle and is integral for ATP production, which helps to promote healthy skin by stimulating the formation of fibrous protein. The Krebs cycle, also known as Citric Acid, occurs in the mitochondria of our cells. This cycle is responsible for metabolizing sugar intake thus breaking it into carbon dioxide, water, and energy. In skin biology, Citric Acid provides cells with a source of useable energy⁴. This, in turn, contributes to the factors that chemically exfoliate the outer layer of the epidermis. Malic and tartaric acids also influence skin tone and have been shown to increase elasticity, which is an important factor to enhancing complexion clarity.



BENEFITS

ACB Fruit Mix works to brighten skin, leaving any signs of dullness behind! ACB Fruit Mix helps normalize the skin by weakening corneocyte adhesion along the stratum corneum to improve exfoliation and enhance cellular proliferation. Incorporating ACB Fruit Mix into final formulas provides consumers with the tactile proof of the product's efficacy, instantly softer, smoother skin. ACB Fruit Mix can further be used in personal care products to help moisturize the skin and decrease the appearance of wrinkles. ACB Fruit Mix is the way to smooth, wrinkle-free skin, truly revealing a rejuvenated complexion!

Although the FDA has approved AHAs for use applications such as increasing cell turnover rates and reducing stratum corneum thickness, we recommend that you consult your legal counsel prior to marketing your product to reduce the risk of patent infringements.

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EFFICACY DATA

Therapeutic Index of AHAs

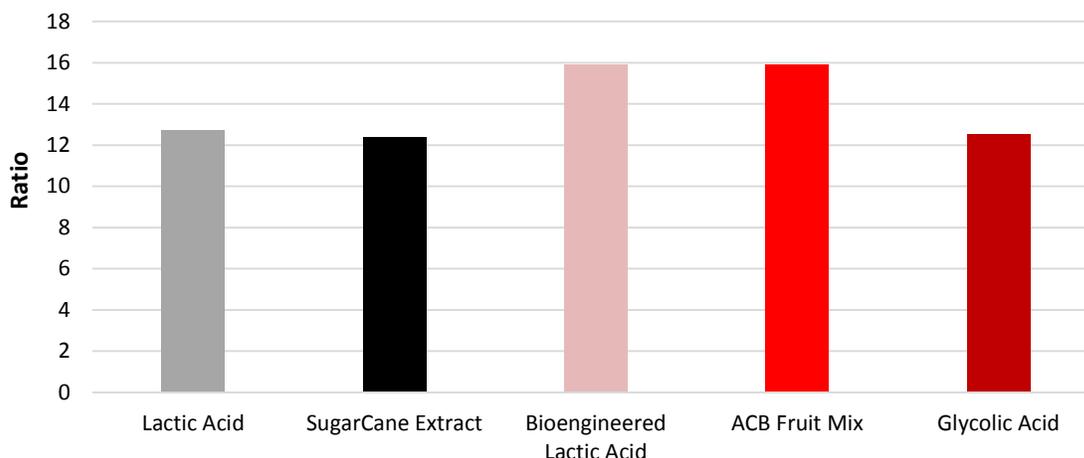


Figure 1. The comparison of therapeutic indices suggests that **ACB Fruit Mix** rates higher on the therapeutic index than both synthetic glycolic and lactic acids

To measure improvements in cell renewal, a skin patch study was performed on the volar forearms of 10 participants between the ages of 22 and 43. The premise of the study was to visually measure improvements in the rate of exfoliation of skin treated with **ACB Fruit Mix** compared to untreated skin. This was achieved by applying fluorescent dye to the skin and counting the days required until the dye was no longer visible. The results indicate that **ACB Fruit Mix** is capable of increasing the rate of cell renewal by 24% and 38% compared to the untreated control.

Cell Renewal

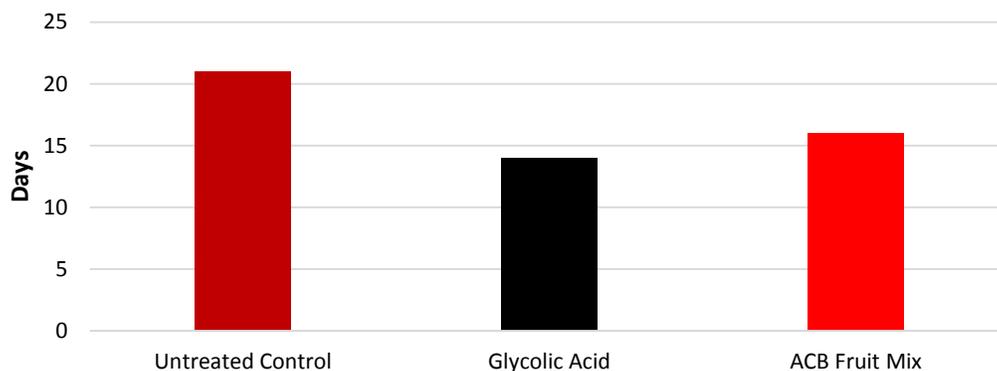


Figure 2. Comparison of test materials ability to increase cellular renewal