ACB Modified Pomegranate Enzyme PF

stable
proteolytic enzymes
lactobacillus lactis
exfoliation
revitalizing, sustainable
hair + skin care, super fruit

BACKGROUND

Pomegranates may be one of the oldest medicines known to man, its use going back perhaps as far as 8000 years. Originating in the area ranging from Persia to Northern India, this fruit has been cultivated throughout the Mediterranean since ancient times. The plant was believed to be introduced to the Americas by the Spanish and is widely cultivated in California and Mexico. Traditionally extracts from the plant have been used for astringent applications. Today, pomegranates are being studied for their many health benefits and immune support. Pomegranates are packed with antioxidants and vitamins and are a good source of folate and potassium. Pomegranates also contain chlorogenic acid, which functions as an anti-inflammatory, and has antimicrobial properties, both excellent for skin and scalp care applications.

SCIENCE

Pomegranates are known to contain proteolytic enzymes. These enzymes are very effective for breaking down large proteins that can accumulate on the skin. Traditionally, enzymes are isolated in a purified form in effort to maximize activity. However in reality, these enzymes do not naturally exist in biological systems as isolated enzymes. They exist as complexes, protected and guided by chaperone proteins.

Cosmetically, fruit enzymes have been used as a safe means of exfoliation. Exfoliation is an important segment of a skin care regimen, which serves to remove the outer layer of dead skin cells that traps both bacteria and sebum. Utilizing pomegranate enzymes for this purpose is appealing to consumers due to the medicinal qualities associated with this ancient fruit. Fruit enzymes, particularly proteolytic enzymes, serve as a safe means of removing product build up from hair strands.

Mindfully sourced, we utilize organic pomegranates grown on farms respective to our three global manufacturing sites. For the United States, our pomegrantes come from the infamous San Joaquin Valley in California. Our Italian facility recieves pomegranates from Spain, and our Taiwan team collects from India. These local partnerships are what make the production of **ACB Modified Pomegranate Enzyme PF** more sustainable and also more secure.

Code Number: 20440PF

INCI Name: Lactobacillus/Punica Granatum Fruit Ferment Extract
INCI Status: Conforms
REACH Status: Compliant
CAS Number: 84961-57-9
EINECS Number: 284-646-0

Origin: Bacteria/Botanical
Processing:
GMO Free
No Ethoxylation
No Irradiation
No Sulphonation
Additives:
Natural Antimicrobial: Leuconostoc/Radish Root Ferment Filtrate
Preservatives: None
Antioxidants: None
Other additives: None
Solvents Used: Water
Appearance: Slightly Hazy to Hazy Viscous Liquid
Soluble/ Miscible: Water Soluble
Ecological Information:
88.50% Biodegradability
Microbial Count: <100 CFU/g, No Pathogens

Suggested Use Levels: 1.0 – 10.0%
Suggested Applications: Exfoliation

Benefits of **ACB Modified Pomegranate Enzyme PF**:

- Functional Active
- Exfoliation
- Skin and Hair Care Applications

ACB Modified Pomegranate Enzyme PF

BENEFITS

ACB Modified Pomegranate Enzyme PF is ideal for skin and hair care applications to promote gentle, yet effective, exfoliation by capitalizing on the properties of proteolytic enzymes. Cellular renewal is beneficial for visibly improving skin tone and texture as well as aiding in the skin's function as a protective barrier from harmful chemical and environmental exposure that can lead to premature aging. This product is optimal for revealing shiny, clean hair and revitalized skin!

ACB Modified Pomegranate Enzyme PF delivers the efficacy of our original ACB Pomegranate Enzyme without discoloration. By eliminating residual carbohydrates we are able to manufacture a product that suffers from none of the Maillard Reaction associated darkening typical of protein solutions.

EFFICACY

ACB Modified Pomegranate Enzyme PF evaluated for its ability to accelerate cell renewal by means of a traditional skin pigmentation assay protocol in comparison with glycolic acid. The results indicate that 5.0% **ACB Modified Pomegranate Enzyme PF** is capable of increasing cellular renewal when compared to the untreated skin dye control site, and comparable to 5.0% glycolic acid with increasing time.

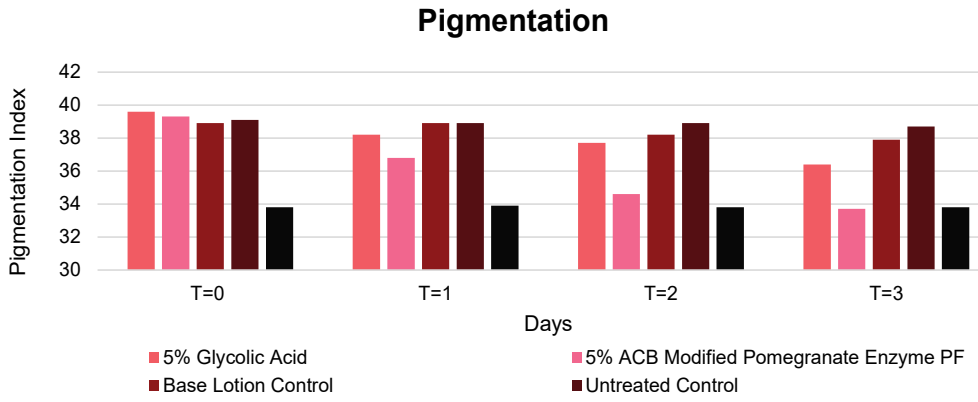

Figure 1. Pigmentation Index Readings.

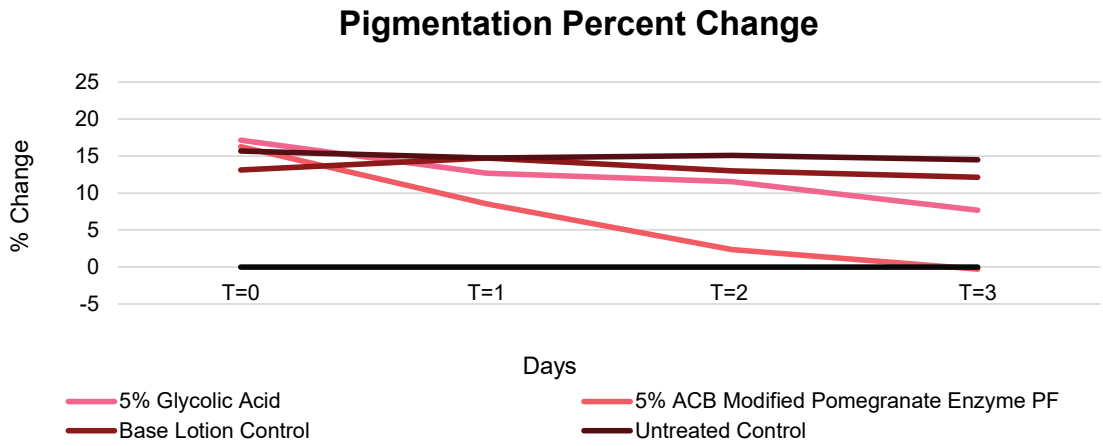

Figure 2. Percent Change in Pigmentation.

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