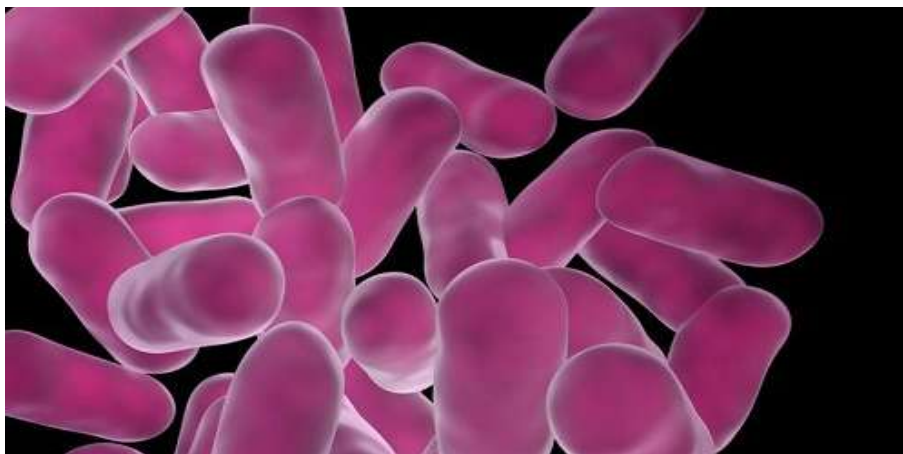


Probacillus Revive



BACKGROUND

Transforming the health and wellness industry, probiotics treatments are now trending in both skin and hair care product lines. Probacillus Revive takes a new approach in delivering probiotics for use in personal care. This ingredient is capable of speeding skin repair by enhancing cellular renewal while also increasing collagen production to improve texture. Combined with the increased rate of exfoliation, the improvements in hydration will further minimize the appearance of wrinkles for additional anti-aging results. Probacillus Revive allows formulators and beauty product manufacturers to capitalize on probiotic trends!

SCIENCE

Prebiotics are non-digestible food ingredients that beneficially affect the host by selectively stimulating the growth and/or activity of bacteria. The oligosaccharides prebiotics used in our process are derived from soy and chicory. The unique culture media greatly influences the active compounds which are produced by the bacteria. Prebiotics are not to be confused with probiotics. Probiotics are defined by The World Health Organization as a live microbial culture product which beneficially influences the health and nutrition of the host. In their truest sense, probiotics are bacteria.

Lactobacillus bulgaricus is perhaps the most popular of all probiotic species and is also the species of bacteria that is used to ferment yogurt. In the food industry, yogurt is arguably the most popular vector for probiotics. Recognized mostly for their digestive benefits, recent clinical research indicates that probiotics confer systemic benefits which extend to the skin. In fact studies have shown that probiotics may even reduce symptoms of atopic dermatitis and eczema in infants and children.

Given that live bacteria cannot be used in cosmetics, manufacturers looking to capitalize on the benefits associated with probiotics have investigated the option of incorporating bacterial lysates into their formulations. The understanding being that these deliver similar probiotic benefits.

A truly unique approach to delivering probiotics, Probacillus Revive consists of isolates of *Lactobacillus bulgaricus* which are intended to reinvigorate and renew the skin. Previous tactics used to manipulate bacteria for cosmetic gain have relied on stressing the organism. However, Active Concepts has taken a novel approach in creating Probacillus Revive. Instead of injuring the cells, the growth media is supplemented with prebiotics such as oligosaccharides.

Code Number: 16618

INCI Name: Lactobacillus Ferment Lysate

INCI Status: Conforms

REACH Status: Complies

CAS Number: 9015-54-7

EINECS Number: 295-635-5

Origin: Biotechnology

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

Semi-Viscous Liquid

Soluble/Miscible: Water Soluble

Microbial Count:

< 100 CFU/g, No Pathogens

Suggested Use Levels: 1.0 – 10.0%

Suggested Applications: Probiotic, Cell Renewal, Moisturization & Anti-Aging

Probacillus Revive



This allows the bacteria to thrive and produce synergistically active compounds which enhance cellular renewal to speed repair while also maximizing collagen synthesis to improve skin tone and elasticity. Ultimately, the result is a healthy and revived aesthetic.

EFFICACY

To measure improvements in collagen production an *in-vitro* assay was conducted on human dermal fibroblasts. Probacillus Revive was shown to increase collagen I production in a dose dependent fashion. In fact 4% Probacillus Revive increased collagen type I synthesis by 164%. Clearly these results suggest that Probacillus Revive is capable of effectively stimulating collagen production to minimize the appearance of wrinkles while improving skin tone and elasticity for superior anti-aging results.

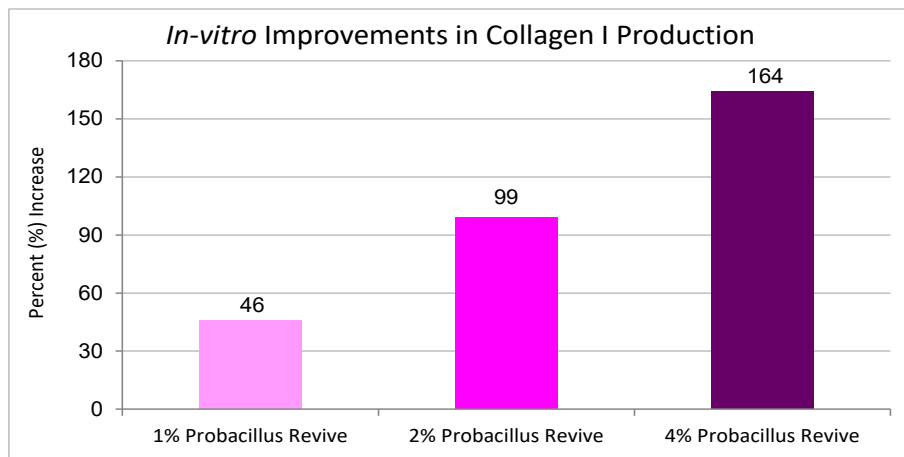


Figure 1. Percent increase in collagen I production following application of Probacillus Revive

Benefits of Probacillus Revive:

- Optimizes Moisture Levels
- Promotes Homesostasis
- Maintains Healthy looking skin
- Capitalizes on Prebiotic and Probiotic Trends

References:

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- 4) Macfarlane G.T., Steed, H. and Macfarlane, S. (2008). "Bacterial metabolism and health-related effects of galacto-oligosaccharides and other prebiotics". Journal of Applied Microbiology. 104 (2): 305-344.

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