

# BIO $\beta$ -Glucan (R)

(INCI : Beta-Glucan)

## Introduction

BIO  $\beta$ -Glucan (R) used *Aureobasidium pullulans* INK-05, a strain extracted from the mud of the Sinan tidal flat among the Korean mudflats registered as UNESCO World Natural Heritage (2021). Unless organic solvents are used, these bacteria were applied with an ultrafiltration system method and an eco-friendly bio-fermentation method using a medium excluding animal raw materials. BIO  $\beta$ -Glucan (R) is a product with various skin effects such as **moisturizing**, **skin regeneration** (epidermis, dermis), **skin regeneration** (skin beauty) due to **UV damage**, **skin barrier reinforcement**, and fine particle blocking effects.

01

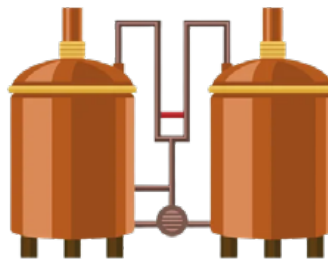
### A strain derived from Korea

Use of Korean derived strains separated from mud in Sinan tidal flat



02

### Application of eco-friendly bio-fermentation method



03

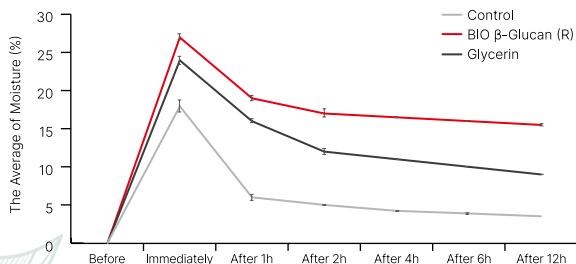
### Excellent Moisturizing effect

Moisturizing durability is better than Glycerin, which is known to be more moisturizing



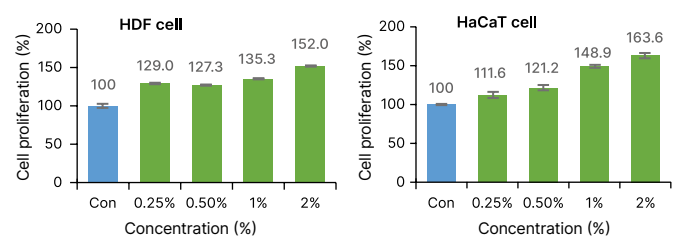
## Efficacy test

### 1. BIO $\beta$ -Glucan (R) Skin Moisturizing effect Test



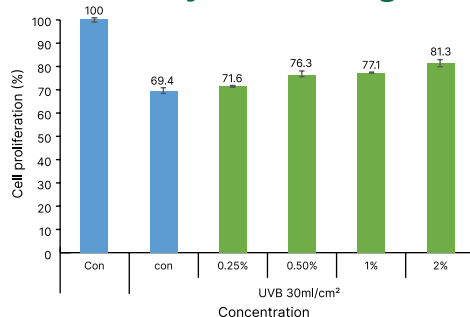
Better moisturizing lasting than Glycerin

### 2. BIO $\beta$ -Glucan (R) skin regeneration and anti-aging effects



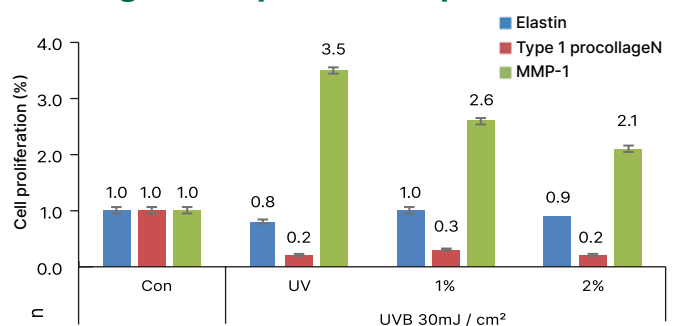
Promoting cell growth in dermis cells and epidermal cells helps regenerate and anti-aging skin

### 3. Effects of proliferation of HDF cells by UV damage



Anti-photo aging effect by promoting UV-damaged dermis cell growths

### 4. Test evaluation of the degree of gene expression-qRT PCR



It appears to significantly inhibit the expression of the MMP-1 gene and inhibits wrinkles in the skin