

# Bioyouth™-Natto

## Natto Extract

- Submerged liquid fermentation
- Rich in multi-active ingredients
- Increase the activity of the skin cells, anti-inflammation and anti-aging

Known as China tempeh, Natto has been more and more popular in recent years, not only because of its unique flavor, but also because of its healthy nutrition for human beings.

Natto Extract (Bioyouth™-Natto) simulates the natural fermentation process, using the non-GMO soybean as the main substrate.

Bioyouth™-Natto is rich in plant collagen, soybean peptides, amino acids, lactic acid, isoflavone, vitamins, coenzyme Q10, and Superoxide Dismutase (SOD), etc., which could be easily absorbed by skin cells, and then help protect the skin barrier, increase the activity of the skin cells, enhance microcirculation, scavenge free radicals and anti-aging, maintain the skin elasticity, and thus improve the skin textures.

Recommended dosage: 0.5% - 2.0%.

INCI name: Bacillus/Soybean Ferment Extract

Applications: Cream, Emulsion, Serum, Facial Mask, Cleanser, Hair Care Products, etc.

# Efficacy

## 1 Protecting the skin barrier

Bioyouth™-Natto is rich in plant collagen with different molecular weights, a variety of amino acids, minerals, lactic acid and other Natural Moisturizing Factors (NMFs), can effectively moisture the skin and protect the skin barrier.

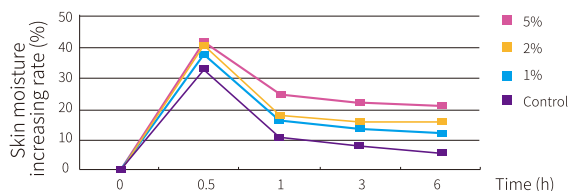


Fig. 1 Skin moisturizing test

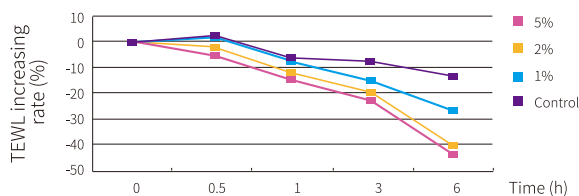


Fig. 2 Transepidermal water loss (TEWL) test

## 2 Increasing cell activity

The soybean polypeptide and polysaccharides in Bioyouth™-Natto can activate the skin cells efficiently. The test result shows that the cellular proliferation and activity are improved, while the accumulation of lipofuscin and cell senescence are delayed.

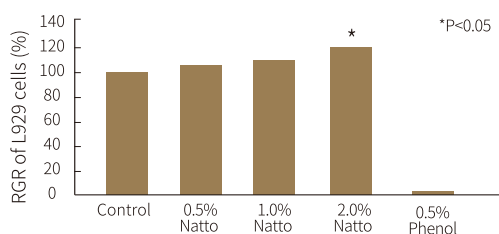


Fig. 3 Fibroblasts cells viability test

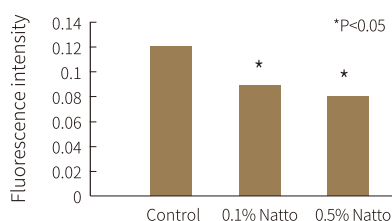


Fig. 4 Lipofuscin accumulation test

## 3 Anti-inflammation and anti-aging

Bioyouth™-Natto is rich in soybean polypeptides, isoflavone, vitamin B, E, K<sub>2</sub>, coenzyme Q<sub>10</sub> and Superoxide Dismutase (SOD), which not only inhibit the release of inflammatory factors effectively, soothing the skin, but also could help to scavenge the free radicals, improve the ability of anti-oxidation and anti-aging.

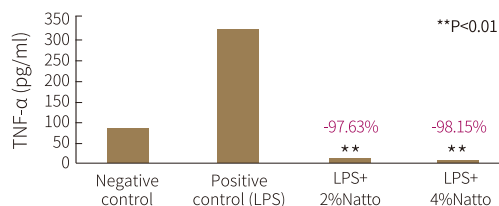


Fig. 5 Anti-inflammation test

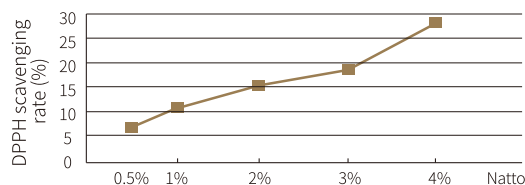


Fig. 6 Scavenging free radicals test

## 4 Increasing skin elasticity

Bioactive factors with multi-functions can penetrate into the skin and nourish the deeper cells, which helps to enhance the skin elasticity.

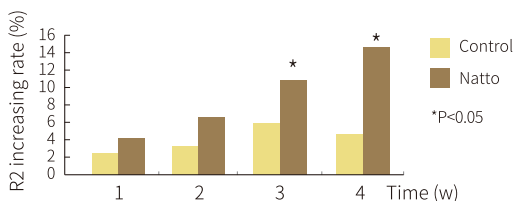


Fig. 7 Skin elasticity test

## 5 Improving the skin texture

Test results on volunteers using the cream for 30 days, show that the cream containing 1% Bioyouth™-Natto improves the skin texture effectively. It can promote microcirculation and recover elastic and even skin tone, leave the skin healthy energetic and smooth.

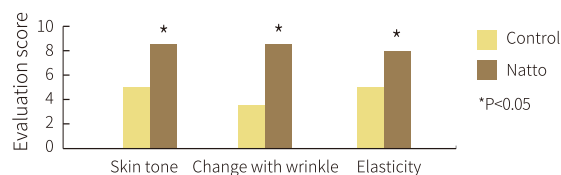


Fig. 8 The sensory evaluation



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