

## Efficacy evaluation

### 2 Smooth skin

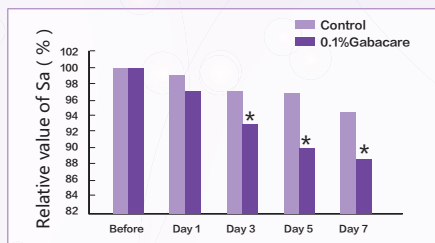


Fig.6 Anti-wrinkle effects of 0.1% Gabacare facial mask

Facial masks containing 0.1% Gabacare were applied for a week evaluating the average wrinkles depth every two days. The results show that the anti-wrinkle effect is very significant with the facial skin becoming smoother and more elastic.

### 3 Increase skin elasticity

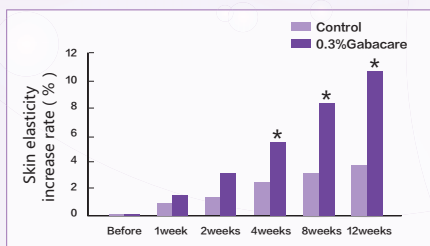


Fig.7 Comparison of skin elasticity variation

After 12 weeks of continuous use of the cream containing 0.3% Gabacare, the skin elasticity was significantly increased by roughly 10%. Skin appeared younger, more moisturized and tighter.

### 4 Sensory evaluation

Gabacare containing cream has obvious anti-aging effects. When volunteers used the eye cream for 30 days, the fine lines around the eyes disappeared, deep wrinkles reduced and the skin elasticity increased. As a main effect, the skin became smooth, pigmentation became weak and skin radiance increased.

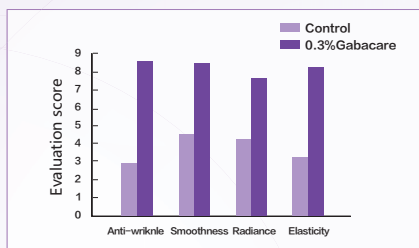


Fig.8 Performance comparison

#### Specification

##### INCI name

Aminobutyric acid

##### CAS No.

56-12-2

##### Appearance

White or nearly white crystal or powder

##### Recommended dosage

0.05~0.3%

##### Usage

Soluble in water, add directly to the aqueous phase

##### Applications

Suitable for face and body care anti-aging products



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*The Science of Beauty*



Natural

Nourish  
and  
Tighten

Repair

Anti-wrinkle

# Gabacare™ BL98T

Aminobutyric acid

*Natural anti-aging factor*

Naturally present in human body

Fermented by Lactobacillus

ECOCERT certification

Reduces wrinkles and smooths skin

Repairs the damaged skin

Promotes the synthesis of HA and collagen



# THE SECRET TO STAYING YOUNG

## 1 Reduce wrinkles

There are GABA<sub>A</sub> receptors on the skin surface. The inhibitory or excitability of GABA<sub>A</sub> receptors controls the relaxation and tension of the expression muscles. GABA can quickly penetrate into the skin and activate the GABA<sub>A</sub> receptors, thus the tense expression muscles are relaxed so the expression lines are stretched.

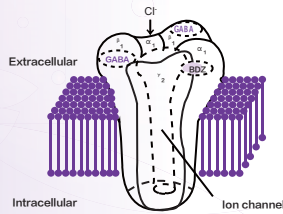


Fig.1 GABA<sub>A</sub> receptor

## Introduction

Gabacare™BL98T also known as γ-Aminobutyric Acid(GABA), a non-protein amino acid, is widely distributed in plants and animals, and plays an irreplaceable role for the regulation of the organisms' life activities.

With the lack of GABA, there will be a tendency for negative emotions. The most direct impacts of negative emotions on physical performance are on the skin that would gray and lose elasticity thus forming wrinkles, and so on.

## Anti-aging mechanism of GABA

## 3 Promote HA and collagen synthesis

In the dermis, GABA can promote the fibroblasts proliferation and the synthesis of HA and collagen, thus improving skin moisture and elasticity, making the skin smooth and tight.

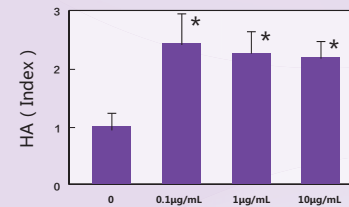


Fig.4 GABA enhanced HA synthesis

More than 2-fold increase of HA secretion from dermal fibroblasts was observed in the presence of 1 µg/mL of GABA as compared to the control.

## 2 Repair the damaged skin

In the epidermis, GABA can repair cuticle barriers because GABA can promote the epidermal cell proliferation and the production of involucrin and glutathione. As a consequence, GABA can reduce skin roughness caused by external factors such as drying, radiation and pollution and ultimately can reduce skin fine lines.

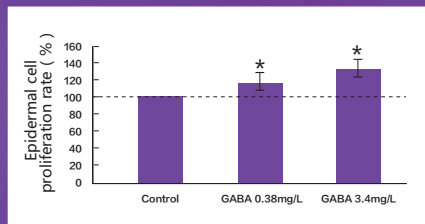


Fig.2 GABA promotes epidermal cells proliferation

3.4 mg/L of GABA increases the production of epidermal cells up to 1.4 times respect to control.

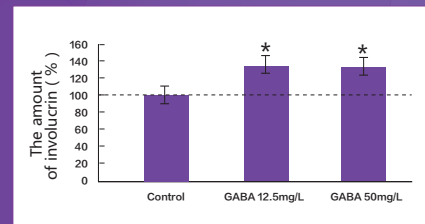


Fig.3 GABA promotes epidermal cells keratinization

12.5 mg/L of GABA can increase the production of involucrin (important for the formation of keratinocytes) up to 1.4 times respect to control.

## Efficacy evaluation

### 1 Reduce wrinkles

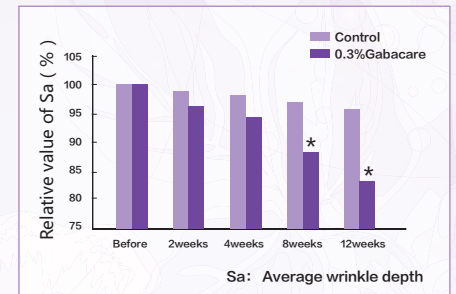
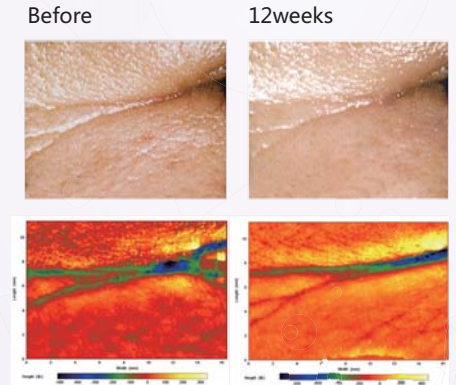


Fig.5 Anti-wrinkle effects of 0.3%Gabacare eye cream

The anti-wrinkle effect was obvious. The regular use of the eye cream for 8 weeks, the wrinkles reduced significantly. After 8 weeks, average depth of wrinkles can be reduced by 12%. After 12 weeks, average depth of wrinkles can be reduced by 17%.

\* Note: The only difference between control and test samples is the formula of test samples contains Gabacare.