

WHITENING ONE

Wisdom from Five Herbal Plants



Skin whitening is common globally especially Asia and African countries. Studies have additionally linked paler skin to achieving various forms of social standing and mobility. Experts noted the influence of mass-marketing and celebrity culture emphasizing whiteness as an ideal of beauty.

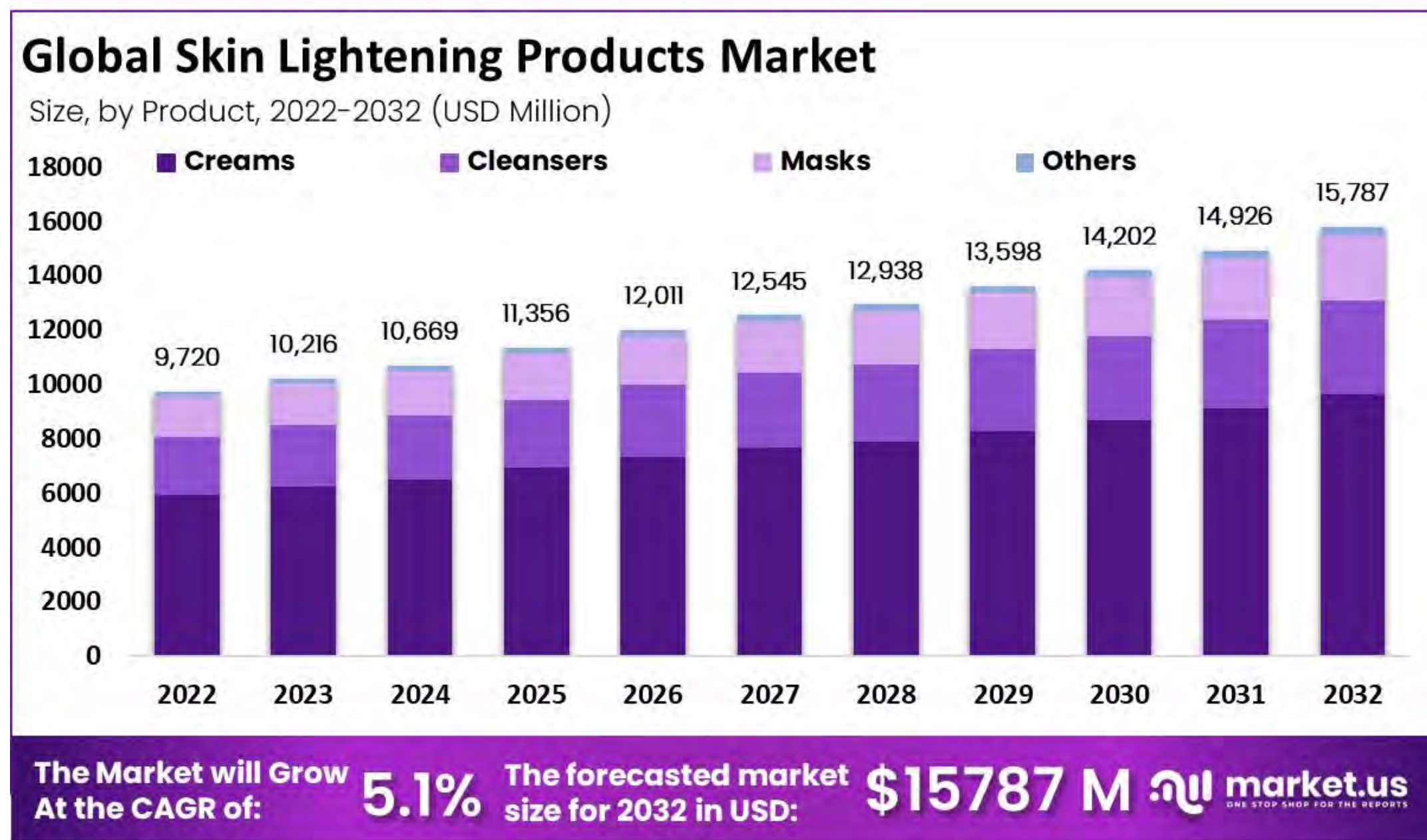
Skin lightening products provide various benefits such as reducing pigmentation, lightening discoloration, promoting even skin tone, and eliminating blemishes. The rising inclination of consumers toward a specific solution to different skin problems, such as age spot or acne spot reduction, has increased the adoption of various skin lighteners in the market.



The Global Skin Lightening Products Market size is expected to be worth around USD 15,787 million by 2032 from USD 9,720 million in 2022, growing at a CAGR of 5.10% during the forecast period from 2022 to 2032.

Asia Pacific accounted for the maximum share of 54.8% in the global skin lightening products market in 2021.

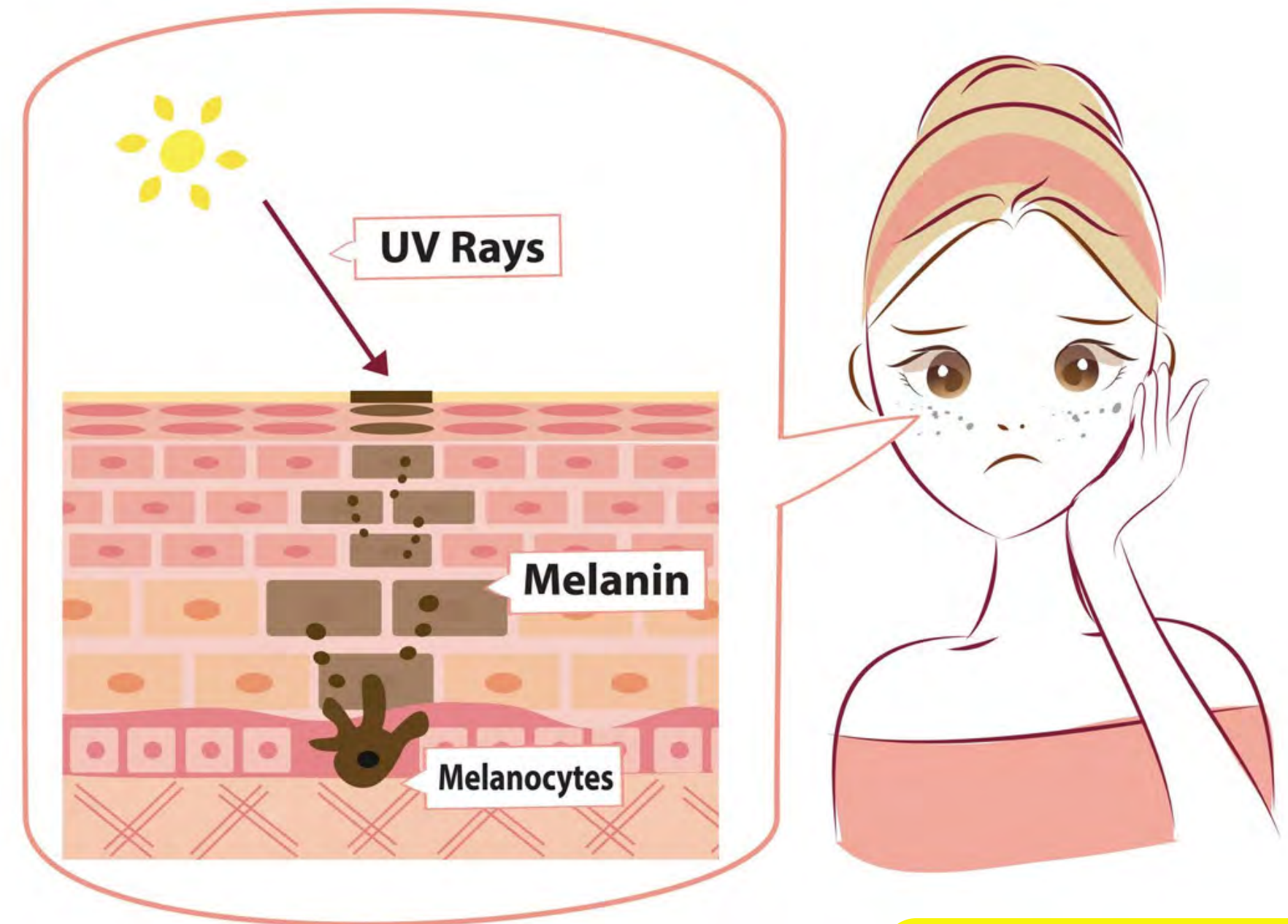
North America is the second-fastest-growing market and is expected to witness a CAGR of 5.6% in the forecast period.



Source: www.market.us.com

Skin whitening, also known as skin lightening and skin bleaching, is the practice of using chemical substances in an attempt to lighten the skin or provide an even skin color by reducing the melanin concentration in the skin.

Melanin is the pigment that gives skin its colour and helps protect it from the sun.



The rising consumer awareness regarding the harmful effects of conventional, synthetic chemical-laden products is anticipated to create new growth opportunities for organically and naturally derived raw materials and products in the market.

Organically- and naturally-cultivated products such as aloe vera, sea kelp, argan oil, and jojoba oil are some of the key raw ingredients used for manufacturing skin lightening products.



WHITENING ONE

WHITENING ONE consists of five natural plants of *Glycyrrhiza inflata*, *Glycyrrhiza glabra*, aloe, green tea, and *morus alba*.

It has the efficacies of whitening, stimulating cell growth, repairing cells, clearing free radicals and reducing spots. It has better tyrosinase inhibition than VC, and has great whitening efficacy no matter to normal skin or damaged skin by UV.

HERBS AND EFFICACIES



Glycyrrhiza glabra Root

Glycyrrhiza glabra, is native to Eurasia, in central and south-western Asia, north-western part of China and the Mediterranean region.

Glycyrrhiza glabra is a common ingredient found in many skin-lightening cosmeceuticals and is also used in the treatment of a wide variety of diseases even outside the scope of dermatology due to its anti-oxidant anti-inflammatory, antiviral, antimicrobial, and anticarcinogenic properties.

The primary antioxidant and anti-inflammatory compounds found in *glycyrrhiza glabra* root are the glycosides - glycyrrhizin and glycyrrizinic acid, flavonoids like glabridin, and saponins.

The main component of the hydrophobic fraction of licorice is glabridin. Glabridin has been shown to prevent UVB-induced pigmentation and to inhibit tyrosinase activity, superoxide anion production and cyclooxygenase activity.



***Glycyrrhiza inflata* Root**

Glycyrrhiza Inflata Root Extract is an active ingredient extracted from the root of Chinese licorice. It has anti-inflammatory, antilipase, and antioxidant action.

According to a traditional Chinese medicine belief, “nine out of ten formulae contain licorice,” and licorice is one of the most effective herbal medicines for reducing toxicity and increasing the efficacy of other herbal medicines when used together.

Licorice has also been documented to help with weariness and debilitation in China. In addition, licorice acts as an anti-inflammatory, reducing allergic responses and preventing liver damage.



***Camellia Sinensis* Leaf**

Tea leaves, particularly from the *Camellia sinensis* plant, are known for their antioxidant properties, which helps to neutralize harmful free radicals and protect against oxidative stress.

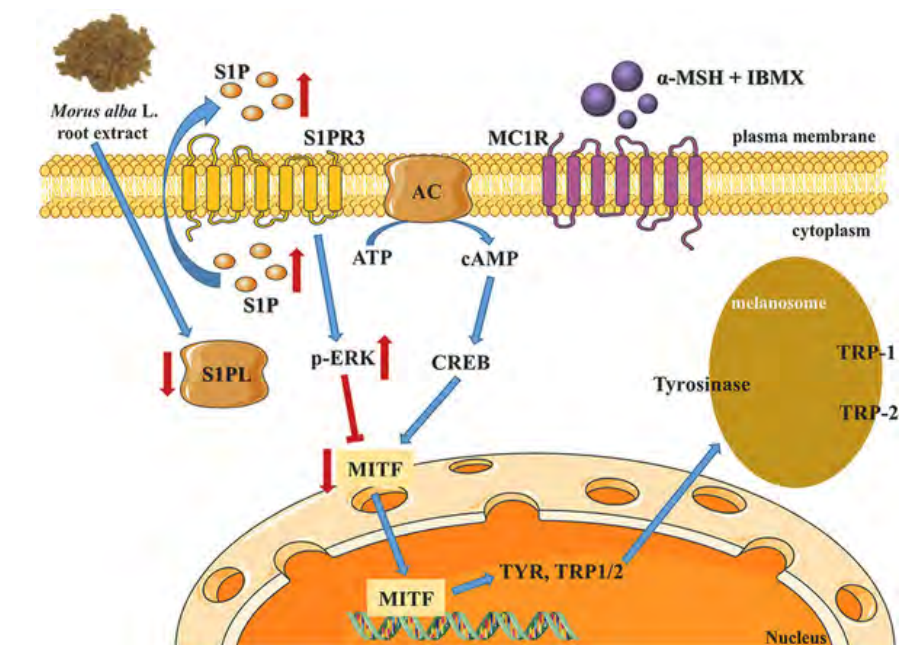
The antioxidant activity and free radical-scavenging ability of the most abundant tea catechins. The principal catechins present in tea leaves are epigallocatechin gallate (EGCG), epigallocatechin (EGC), epicatechin gallate (ECG), gallic catechin (GC), epicatechin (EC), and catechin.



Morus alba Root

Morus alba L. has long been used for beauty in many Asian countries and regions, including anti-aging and hyperpigmentation.

Morus alba root extract has intracellular tyrosinase activity in a dose-dependent manner, thereby reducing the accumulation of melanin involving MITF degradation mediated via S1P–S1PR3-ERK signaling through increasing cellular S1P levels by inhibiting S1PL activity.



Aloe vera

Aloe vera is an herbaceous and perennial plant that belongs to the Liliaceae family and used for many medicinal purposes.

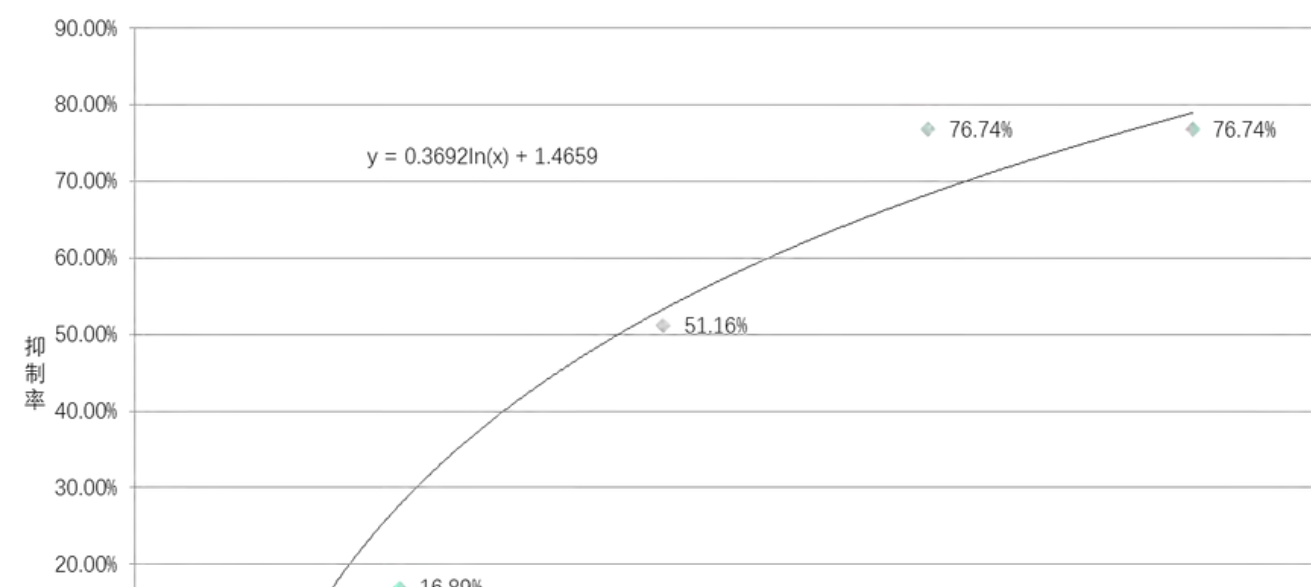
Aloe vera contains substances known as glycoproteins and polysaccharides. Glycoproteins speed the healing process by stopping pain and inflammation while polysaccharides stimulate skin growth and repair. These substances may also stimulate the immune system.

It can not only increase the amount of collagen in wounds but also change the composition of collagen, increase collagen cross-linking and thereby promote wound healing.

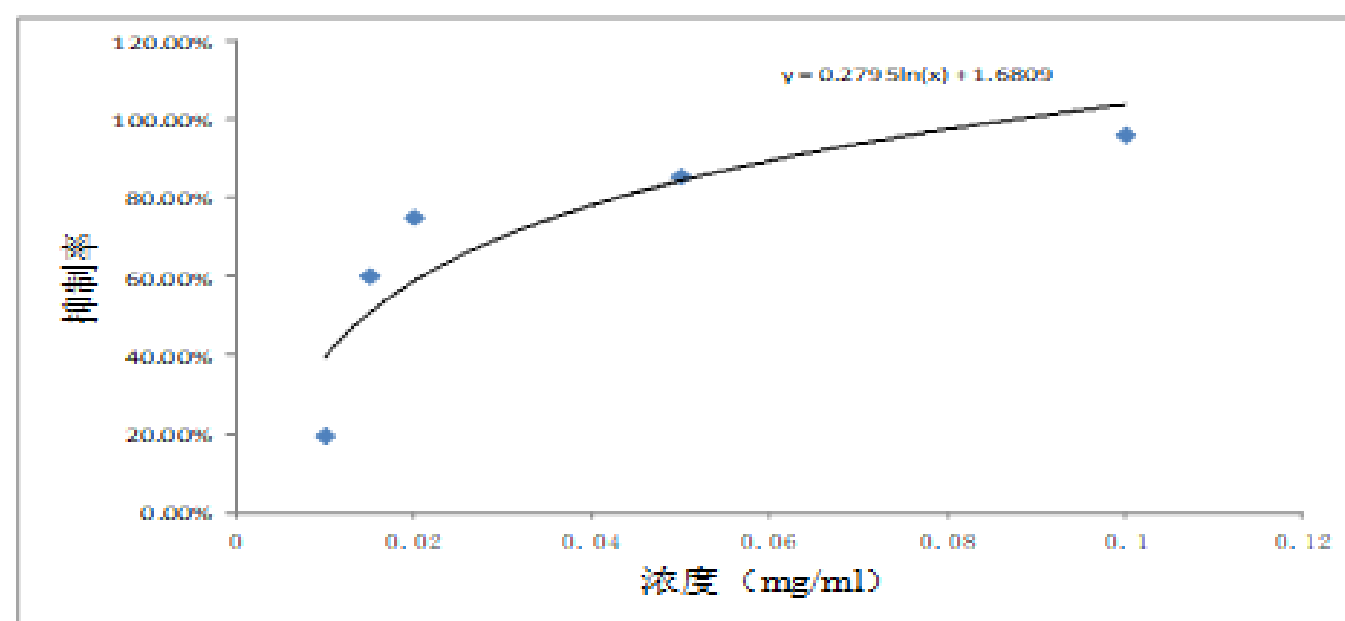
In vitro studies and studies conducted on living organisms have shown that *Aloe vera* can inhibit thromboxane (an inhibitor of wound healing), improve the wound healing process, and reduce inflammation by the inhibition of IL-6 and IL-8, the reduction of leukocyte adhesion, an increase of IL-10 levels, and decrease of TNF alpha levels.



Tyrosinase Inhibition Test



Tyrosinase Inhibition of VC Powder



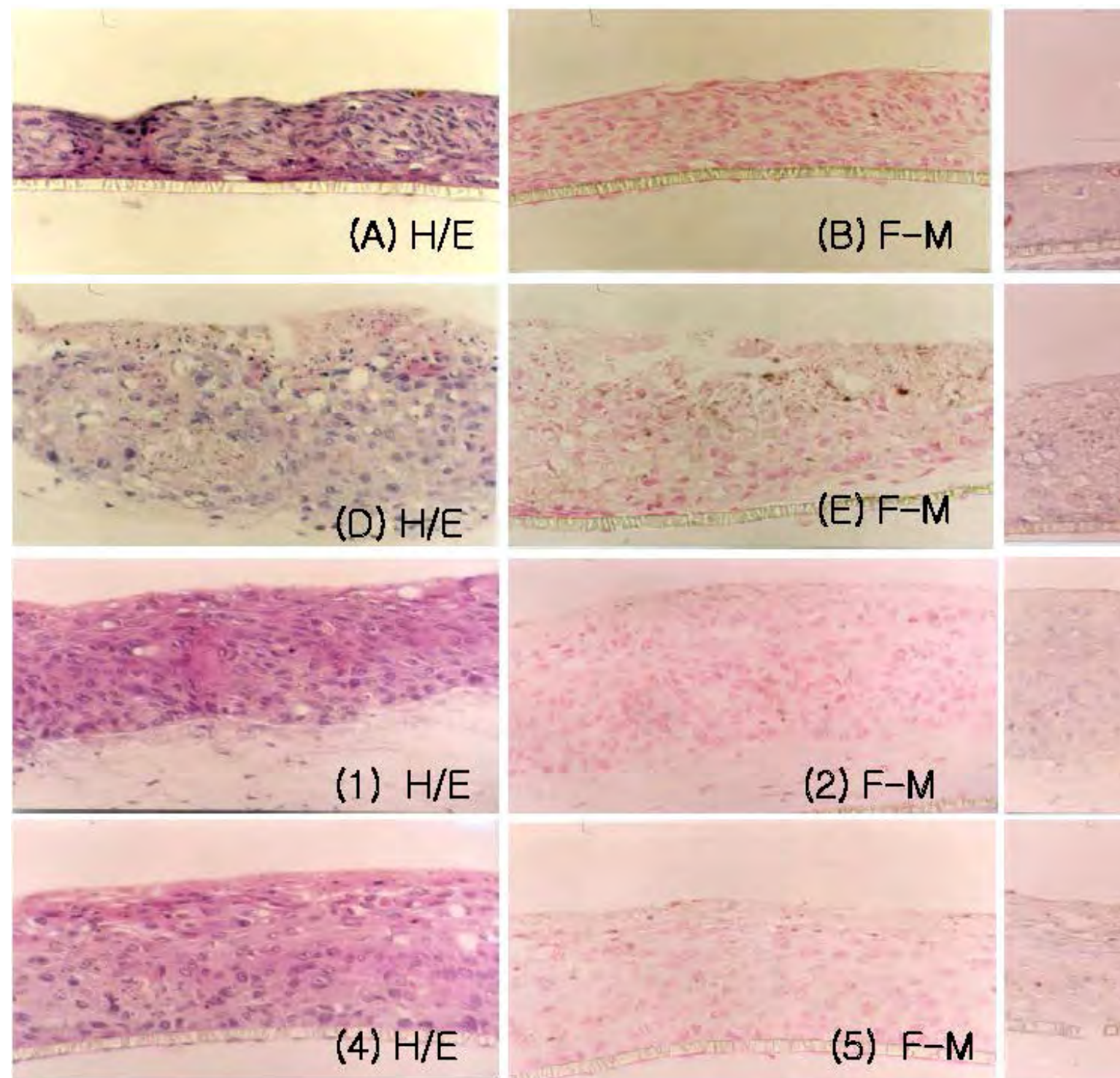
Tyrosinase Inhibition of WHITENING ONE

EC50 Comparison

Sample	EC50
WHITENING ONE	0.0146mg/ml
VC	0.073mg/mL

Conclusion: The inhibition rate of WHITENING ONE to tyrosinase is obviously better than VC.

Melanin Synthesis Inhibition Test (3D Skin)



1. UVB 0.05J/cm²/d for 5 days.
2. H/E (Hematoxylin-eosin Staining), observe cells and texture conditions
3. F-M (Masson-Fontana), stain melanin
4. HMB-45(Staining against melanoma), stain melanocyte and early melanosomes
5. (A), (B), (C): Process by H/E, F-M, HMB-45
6. (D), (E), (F): Process with UVB (0.05J/cm²/d, 5 days)
7. (1), (2), (3): Process with 20μg/ml Whitening One PF
8. (4), (5), (6): After processed with UVB (0.05J/cm²/d, 5 days), process with WHITENING ONE

Conclusion: WHITENING ONE has strong whitening efficacy to normal skin, and also has obvious whitening and repair efficacy to damaged skin by UVB.

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