



Centella Asiatica Extract

Healing Plant

**real repair from
the miracle plant extract**

V1.0

www.layncorp.com

CATALOGUE

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01

Company Overview



ABOUT LAYN

Founded in 2000 and headquartered in Guilin, Guangxi, Layn Natural Ingredients is a leading high-tech innovator in natural health products. The company specializes in the production, research, and development of premium botanical ingredients, providing innovative solutions for the food & beverages, dietary supplement, personal care, animal feed, and pet nutrition industries worldwide.

High-Tech Industry Leader in Natural Botanical Extraction



- Nearly **30 years** of expertise in botanical extraction
- Over 300** core technologies for natural ingredient extraction
- Drafting organization** for the international business standard of Centella Asiatica extract

Key Recognitions:

- Designated a **“National Green Factory”** in 2019

GLOBAL BOTANICAL INNOVATION

—NEARLY 30 YEARS—

Trusted by companies in over 60 countries and regions



Four Core Advantages



01 Advantage in Raw Materials

- The sustainable use of plant resources
- Standardized planting
- Non-GMO standards

02 Advantage in R&D

- Post-Doctoral Research Center
- Guangxi Academician Workstation
- National Tropical Fruit Research Center
- Undertakes national key scientific research program

03 Advantage in Testing

- ISO/IEC 17025:2017 accredited
- Management system has been established according to ISO17025

04 Advantage in Capacity

-INTELLIGENT MANUFACTURING

- Intelligent botanical extraction factory
- Annual raw material processing capacity exceeds 100,000 tons

Quality Certification

Monk Fruit Extract and Stevia Extract have obtained FDA GRAS certification in the United States.

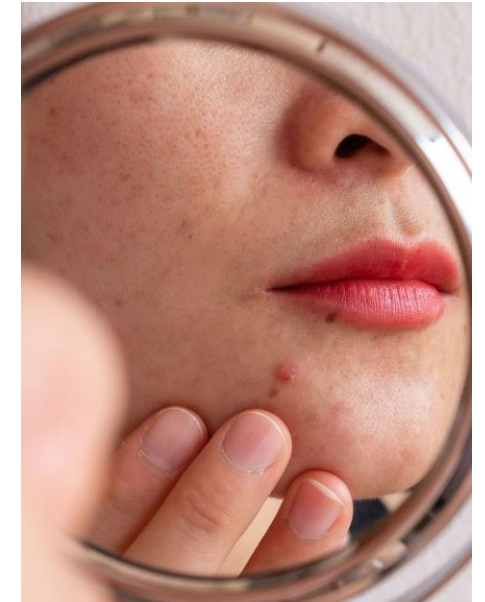
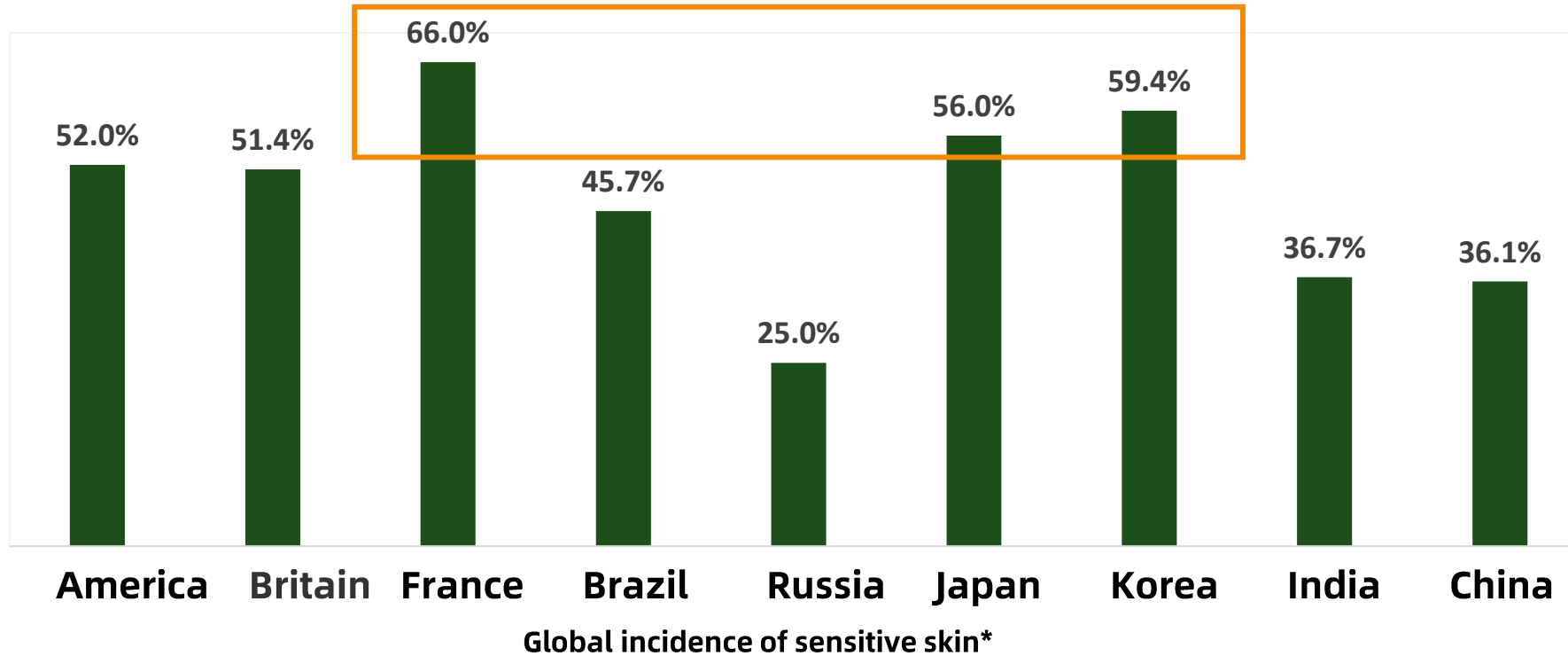




02

Development Background

Global Distribution of Sensitive Skin



- Data show that sensitive skin have significant regional differences in the world.
- **France** has the highest incidence of sensitive skin, up to 66%, followed by **South Korea and Japan**.
- **Russia**, had the lowest incidence of sensitive skin at 25%.

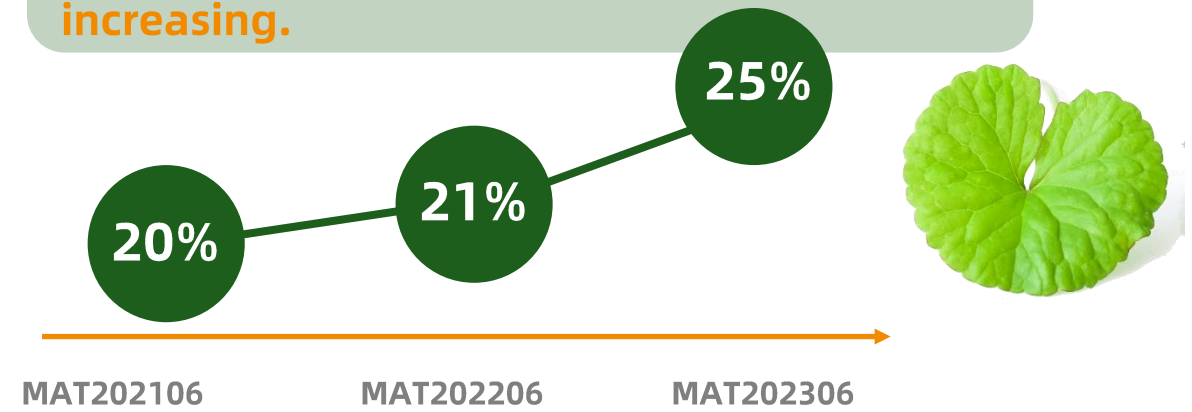
*: femaleData
Source: China Clinical Treatment Guidelines for Sensitive Skin (2024 edition)

Centella Asiatica Extract Highly Favored

TOP10 soothing/healing ingredients

No.	Ingredients
1	Centella Asiatica Extract
2	Ceramide NP
3	Dipotassium Glycyrrhizate
4	Portulaca oleracea extract
5	Ectoin
6	Beta-Glucan
7	Bisabolol
8	Hamamelis virginiana Extract
9	Chrysanthellum Indicum Extract
10	Chamomilla recutita flower Extract

The proportion of products containing any of the Centella asiatica ingredients in the new products of sensitive skin care is **gradually increasing**.



- 01** Over **30,000 brands** use Centella asiatica extract
- 02** Over **150,000 products** containing Centella asiatica extract
- 03** Centella asiatica extract has a high **cosmetic index** that reach to **99.81**

Source : Mintel/Meilixiuxing





03

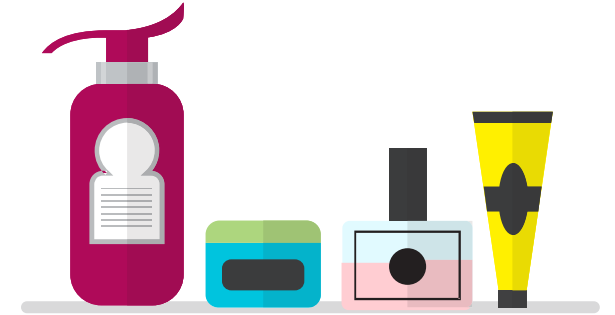
Product Introduction

Centella Asiatica Extract

Latin Name: Centella asiatica (L.) Urban

Also Known As: Horseshoe grass, Tiger grass

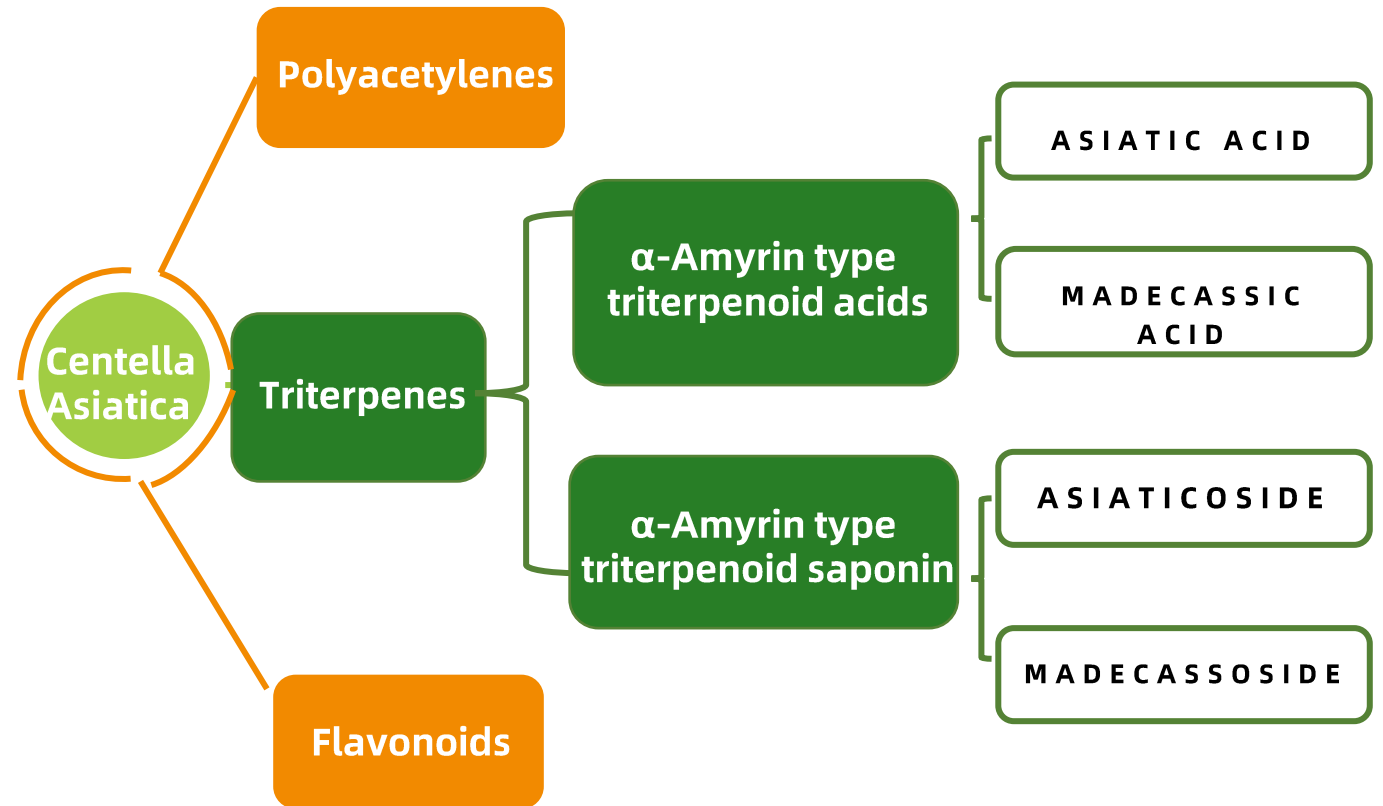
Species: Umbellales, Umbellimacferae, Centella genus



In China, India, Africa, Philippines, Madagascar, it has been used for more than **3,000** years

Traditional uses

- Accelerating wound healing
- Reducing skin scarring
- Treating of chronic skin diseases

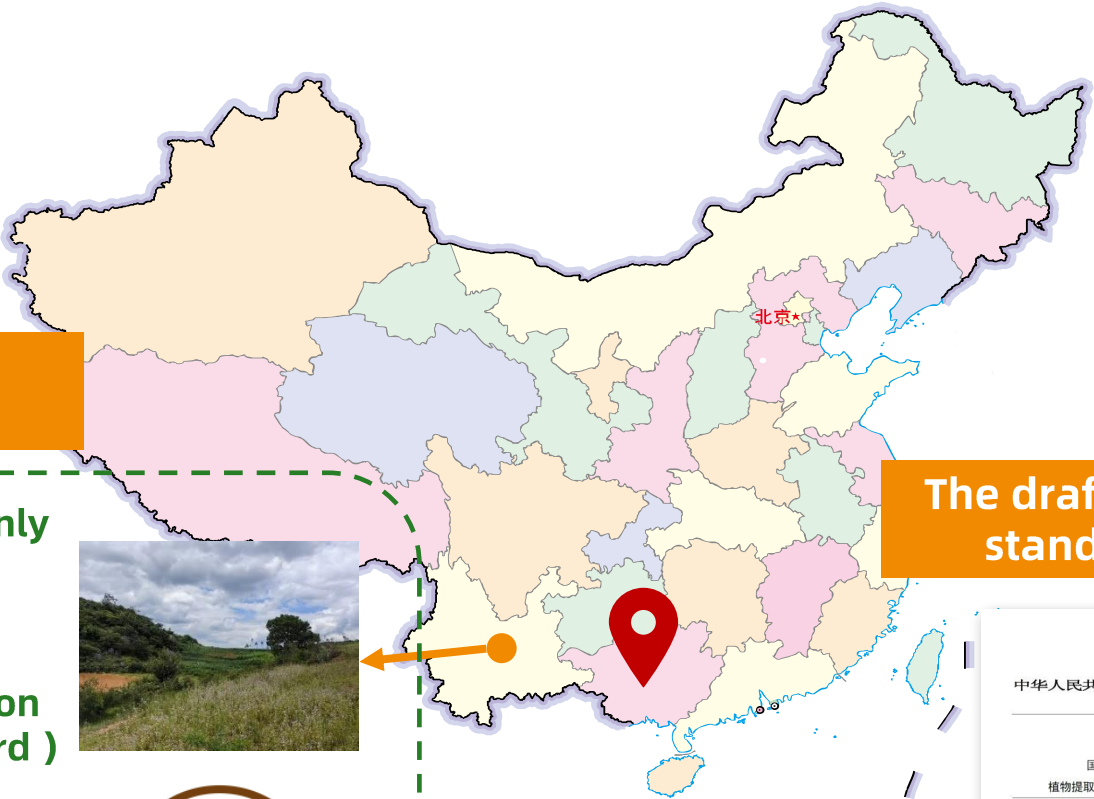


Product Features of Layn

Innovative Patented technology



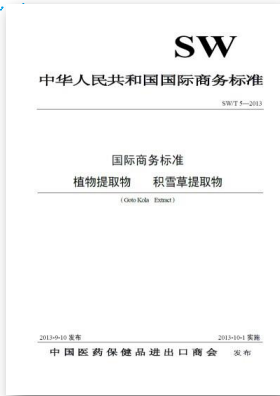
Selected origin of Centella Asiatica



- Layn's raw material mainly from: Yunnan/Guangxi
- Obtained the organic certificate of wild collection (Ecocert EU / US Standard)



The draftsman of international commercial standard for Centella Asiatica Extract



Centella Asiatica Extract from LAYN

Main Specification

Total Triterpenes series :

20%、70%、80%

INCI Name: CENTELLA ASIATICA EXTRACT

**Main Component: Asiaticoside、
Madecassoside**

Solubility: Water-soluble

Appearance: Off-white powder

Recommended dose : 0.1-2%

Madecassoside series :

80%、85%、90%、95%

INCI Name: MADECASSOSIDE

Main Component: Madecassoside

Solubility: Water-soluble

Appearance: Off-white powder

Recommended dose: 0.05-1%

More series:

Asiaticoside 36.0%-44.0%、Total Acid 56%-64%

INCI Name: CENTELLA ASIATICA EXTRACT

**Main Component: Asiaticoside、
Asiatic Acid、Madecassic Acid**

Solubility: Alcohol-soluble

Appearance: Off-white powder

Recommended dose: 0.05-2%



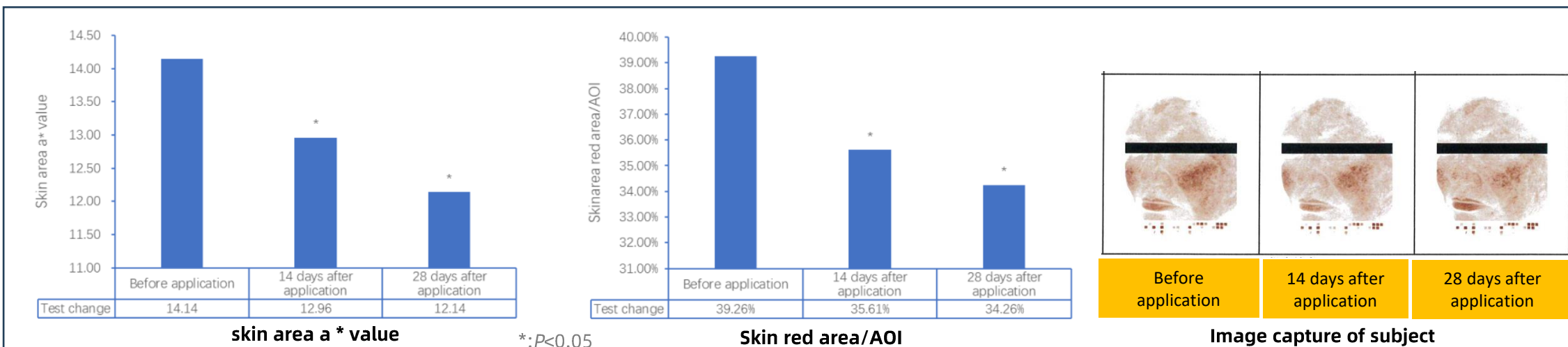
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Efficacy Verification

Soothing Effect

Method (in vivo)

- **Thirty-three** Sensitive-skin volunteers were recruited to apply **facial** essence containing 0.2% Asiaticum asiatica extract every morning and evening, and evaluate the soothing, repairing and moisturizing effects of the product **before use, 14 days and 28 days** after continuous use.
- **(VISIA-CR&IPP)**: Analyze the skin's **a * value** and **red area**



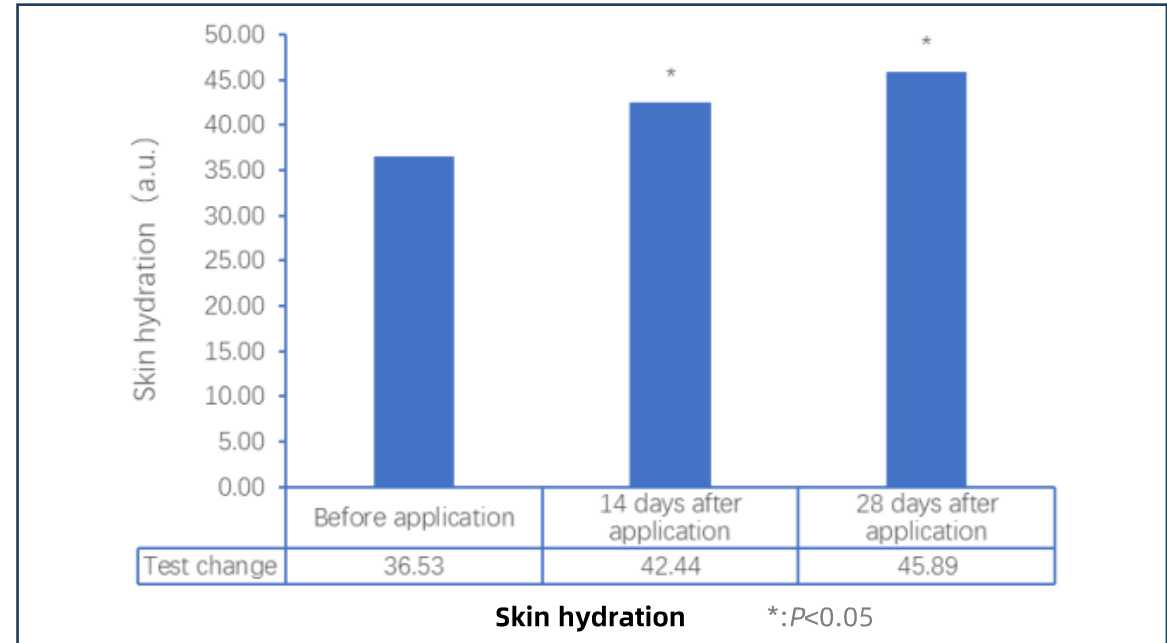
Conclusion

- **14、28days** after application, the **red area a * value** of cheek decreased by **8.37%、14.18%** significantly, and the **red area/AOI** of cheek decreased by **9.29%、12.74%** significantly.
- **Skin' redness** has been improved.

Moisturizing Effect

Method (in vivo)

Skin water Content Tester : **Corneometer CM825**
test **Skin hydration**



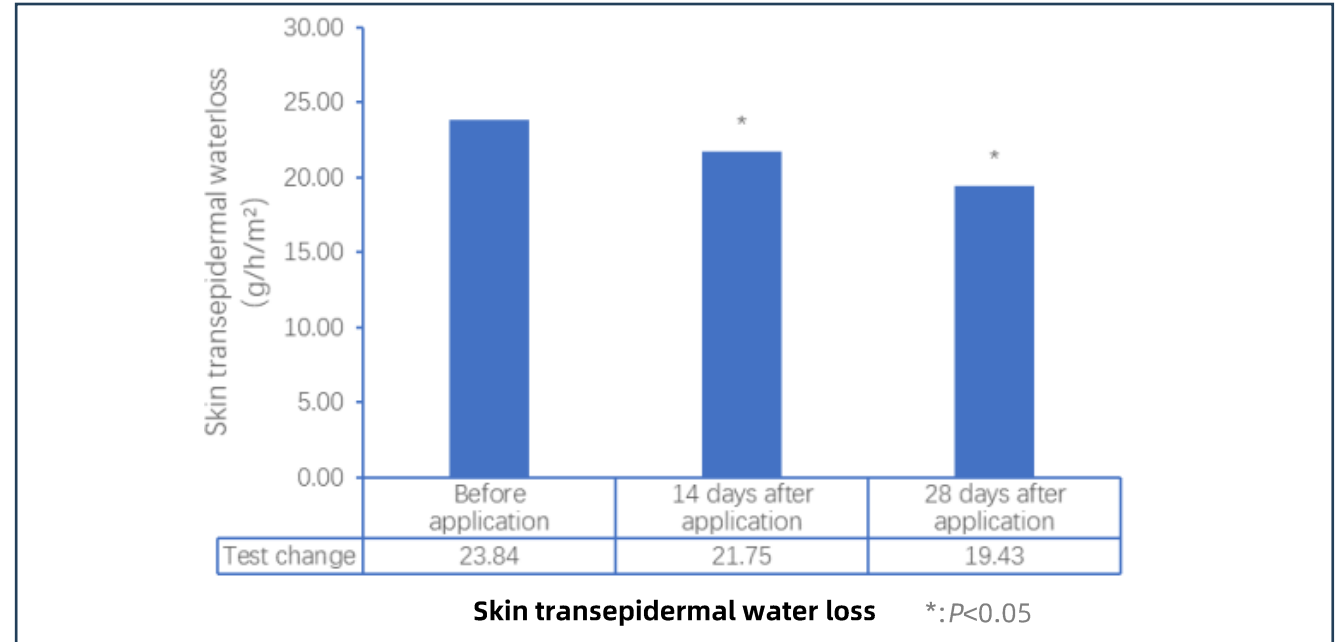
Conclusion

- **14 、 28days** after application, the skin hydration of cheek increased by **16.15%、 25.60%** significantly .

Repairing Effect

Method (in vivo)

Skin Moisture Loss tester : **TewameterTM Hex**
test **Skin transepidermal water loss**



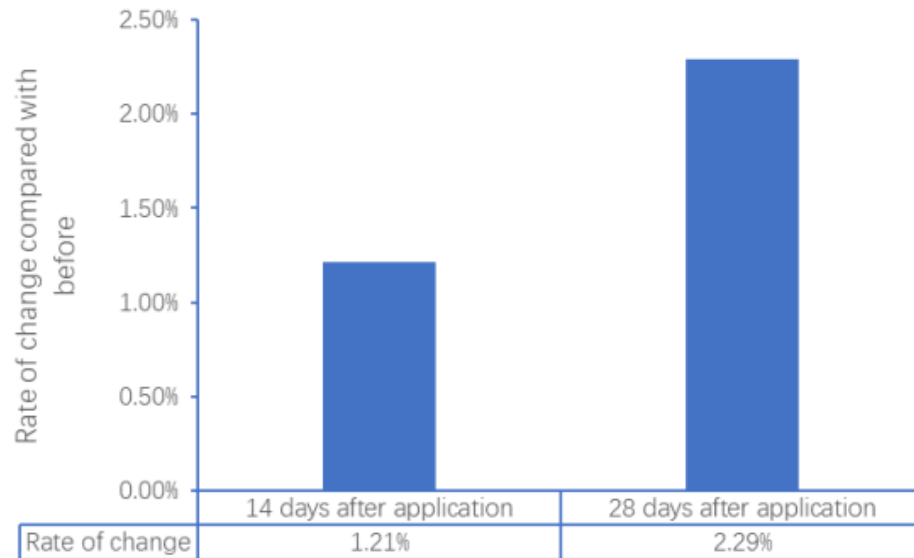
Conclusion

- **14 、 28 days** after application, the skin transepidermal water loss rate of cheek increased by **8.80%**、**18.52%** significantly.
- **Improved skin barrier function.**

Brightening Effect

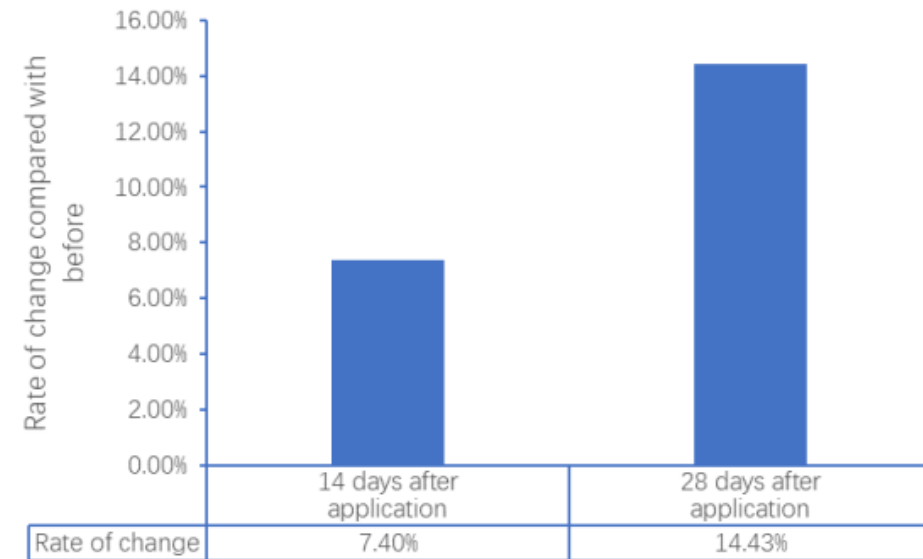
Method (in vivo)

(VISIA-CR&IPP): Analyze skin tone L^* 、 ITA° value



Rate of change Skin tone L^* value

Rate of change = $(\text{measured value after application} - \text{measured value before application}) \div \text{measured value before application} \times 100\%$



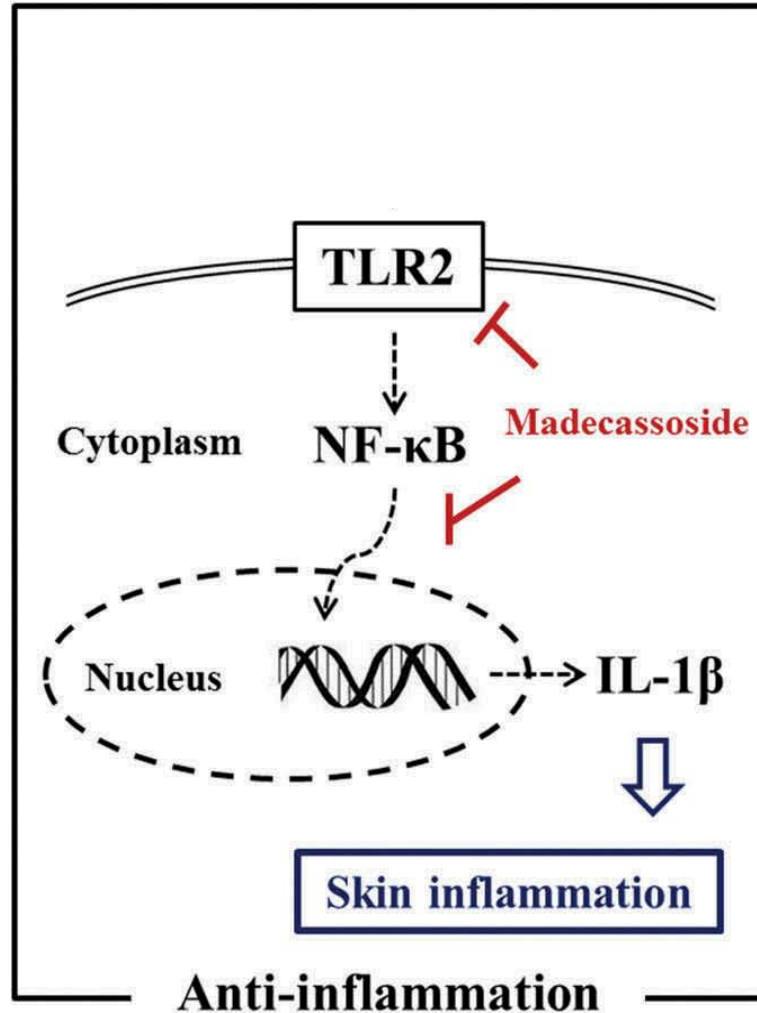
Rate of change Skin tone ITA° value

Rate of change = $(\text{measured value after application} - \text{measured value before application}) \div \text{measured value before application} \times 100\%$

Conclusion

- 28 days after application, the L^* 、 ITA° value of skin tone increased by 2.29%、14.43% significantly.

Anti-Inflammatory Effect



NF-κB is considered to be a key transcription factor in inducing inflammatory response, so blocking the NF-κB signaling pathway is considered to be one of the anti-inflammatory mechanisms.

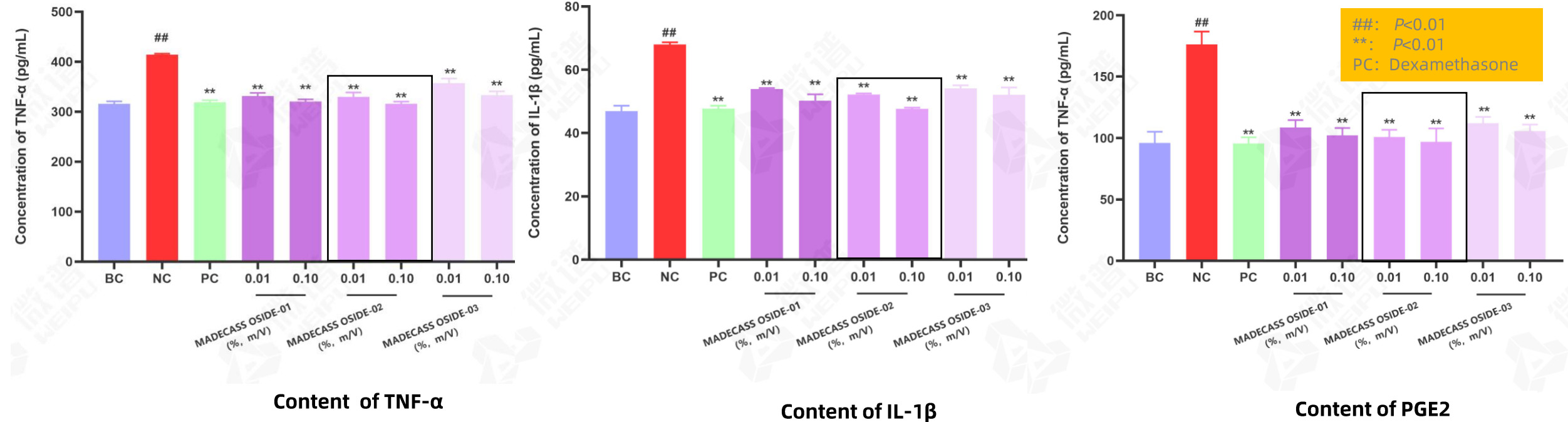
NF-κB enters the nucleus after dissociation from IκB, and can regulate the transcription of inflammatory cytokines (such as IL-1, IL-2, IL-6, IL-8, IL-1β and TNF-α) and cell proliferation genes, participating in inflammation regulation.

As an inhibitor of NF-κB, **Madecassoside** can also reduce the expression of IL-1β, TNF-α, PGE2.

Anti-Inflammatory Effect

Test Method (in vitro) : Q/WP-SHACDDTW-WIF-1014

Macrophage RAW264.7 was used to evaluate Madecassoside on the inhibiting secretion of inflammatory factors (TNF- α , IL-1 β , PGE2)



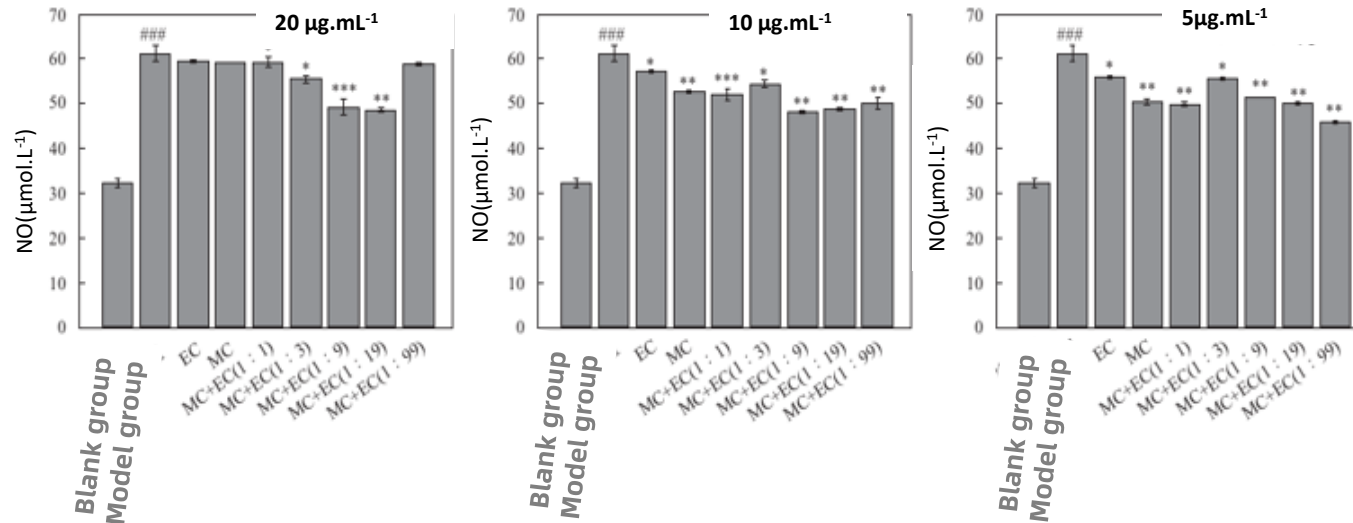
Conclusion

- Madecassoside can significantly inhibit the secretion of inflammatory factors of TNF- α , IL-1 β , and PGE2.
- Compared with commercially samples 01 and 03, the effect of LAYN' (sample No.2) is better.

Synergistic Anti-inflammatory of Madecassoside and Ectoin

Methods (in vitro)

RAW264.7 mouse macrophage model was used to evaluate Madecassoside and Ectoin on the **inhibitory rate of NO** produced by LPS-induced, and the synergistic anti-inflammatory of the them



Effect of components on NO produced induced by LPS in RAW264.7 cells

###P<0.001; *P<0.05, **P<0.01, ***P<0.001

Experimental group	Inhibition rate of NO/%		
	20 µg/mL	10 µg/mL	5 µg/mL
Model group	—	—	—
Ectoin(EC)	2.83	10.19	13.40
Madecassoside(MC)	3.58	25.47	32.08
MC+EC (1 : 1)	6.98	31.30	38.75
MC+EC (1 : 3)	19.11	22.63	19.51
MC+EC (1 : 9)	40.24	45.39	33.88
MC+EC (1 : 19)	43.36	43.22	38.48
MC+EC (1 : 99)	5.20	32.53	45.91

Inhibition rate of NO produced induced by LPS in RAW264.7 cells

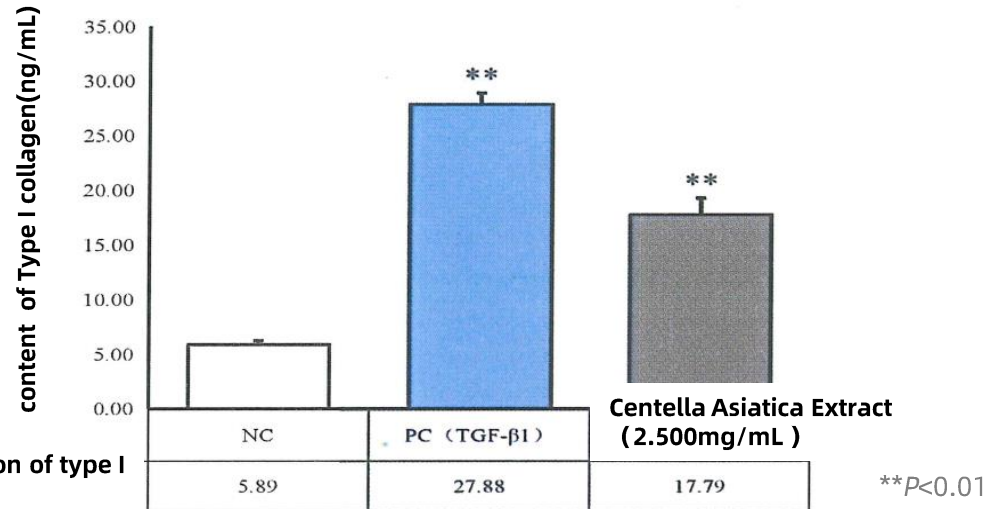
Conclusion

- The combination of Madecassoside and Ectoin had higher inhibition rate of NO than that of a single component; which showed synergistic anti-inflammatory effect.

Firming & Anti-Wrinkle Effect

Test Method (in vitro) : QD-02-80

Test Item : **Type I collagen content**



Conclusion

- Centella Asiatica Extract significantly promoted the secretion of **type I collagen**.
- ★ • Madecassoside can significantly promote the synthesis of **type III collagen** [1]

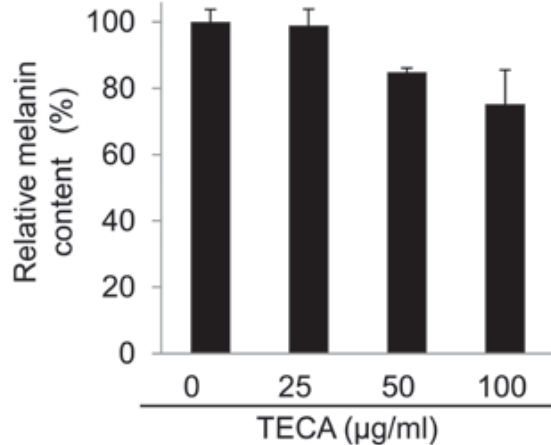
Data source: B.I.R.D

[1]: Comparative activity of asiaticoside and madecassoside on type I and III collagen synthesis by cultured human fibroblasts

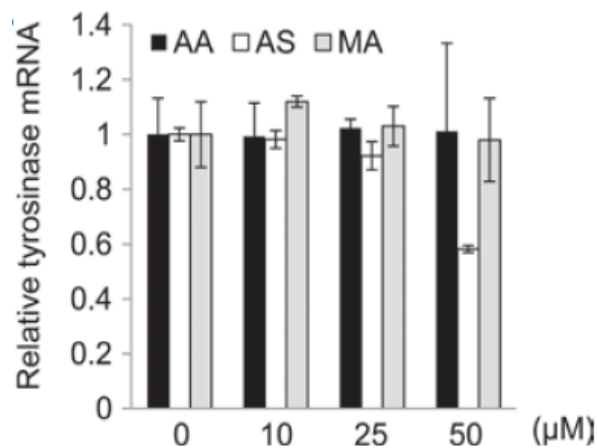
Whitening Effect

Methods(in vitro)

B16F10 cells were cultured with Centella Asiatica Extract (Asiatic acid, Asiaticoside, Madecassic acid) and its components for 48H, and **melanin content and tyrosinase mRNA** were detected



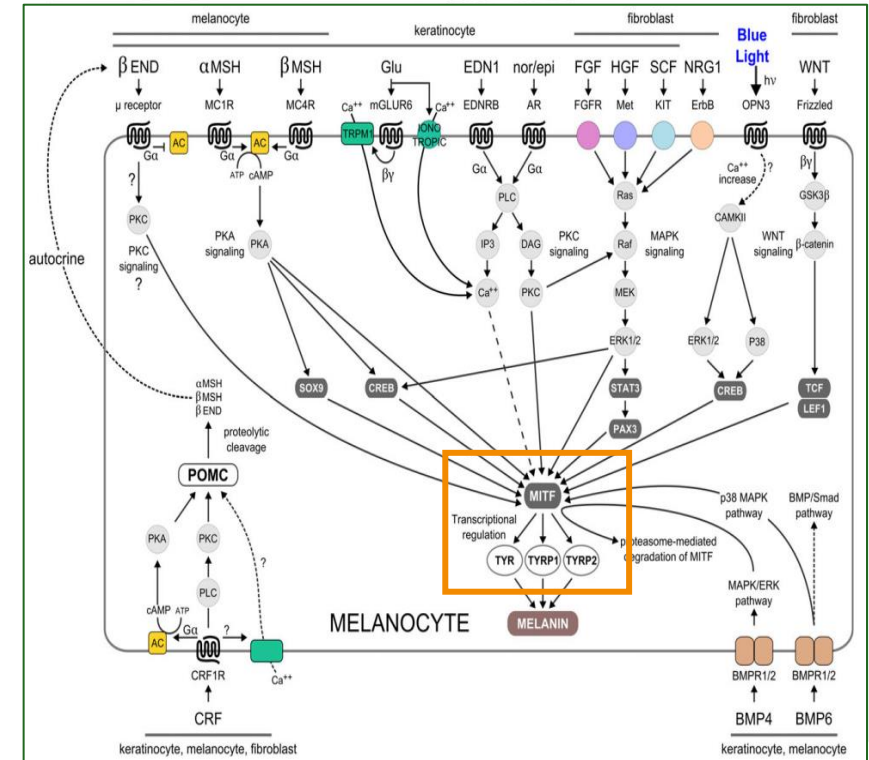
Content of melanin in B16F10 cells treated with TECA
TECA: Asiatic acid, Asiaticoside, Madecassic acid



Protein levels of tyrosinase in B16F10 cells treated with TECA components

AA: Asiatic acid
AS: Asiaticoside
MA: Madecassic acid

Three key enzymes in melanin synthesis, tyrosinase, tyrosinase-associated protein (TRP1 and TRP2), are regulated by the MITF gene.




Major signalling pathways involved in skin pigmentation

Conclusion

- Centella Asiatica Extract, especially **Asiaticoside**, can inhibit melanin production by inhibiting the expression of tyrosinase mRNA. The decrease of **tyrosinase mRNA** is mediated by the inhibition of **MITF binding to DNA**.

Gentleness - Chicken embryo chorioallantoic membrane blood vessel test

Safety - Hazardous Substances statement


NAGO

广州艾卓生物科技股份有限公司分析中心
ANALYSIS CENTER OF GUANGZHOU NAGO BIOTECHNOLOGY Co., LTD
分析检测报告
REPORT FOR ANALYSIS

报告编号: AZ-RP-04-2211-010

委托单位: 合壹商埠(广州)贸易发展有限公司

执行单位: 广州艾卓生物科技股份有限公司分析中心

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莱茵生物

风险物质证明

商品名: 积雪草提取物 GKE40

由桂林莱茵生物科技股份有限公司生产的积雪草提取物 GKE40, 经由合格原材料——粉碎——提取(水)——过滤等生产工艺而获得, 所以不存在农药残留风险物质, 符合《化妆品安全技术规范(2015年版)》及化妆品相关的法律法规的要求。

公司: 桂林莱茵生物科技股份有限公司
2023年02月21日



敬启者:


兹证明本公司生产的下列产品,
产品名称: 积雪草提取物/羟基积雪草苷90%(GKE40)

生产厂家: 桂林莱茵生物科技股份有限公司

其最终产品中的以下药残留检测结果均为未检出:
 α -六六六, β -六六六, γ -六六六, δ -六六六, 六六六
p.p'-滴滴伊, p.p'-滴滴涕, o.p'-滴滴涕, p.p'-滴滴涕, 滴滴涕
甲基毒死蜱, 溴氰菊酯

我们完全理解这份声明的重要性和准确性。

此致



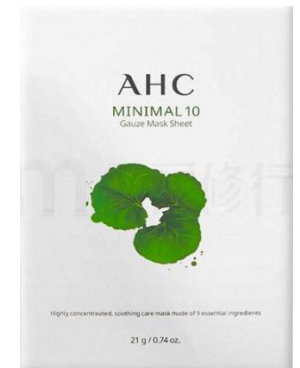
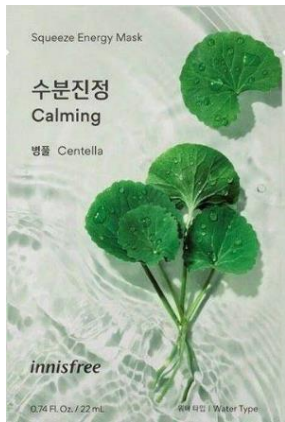
公司名称: 桂林莱茵生物科技股份有限公司
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日期: 2022年4月12日



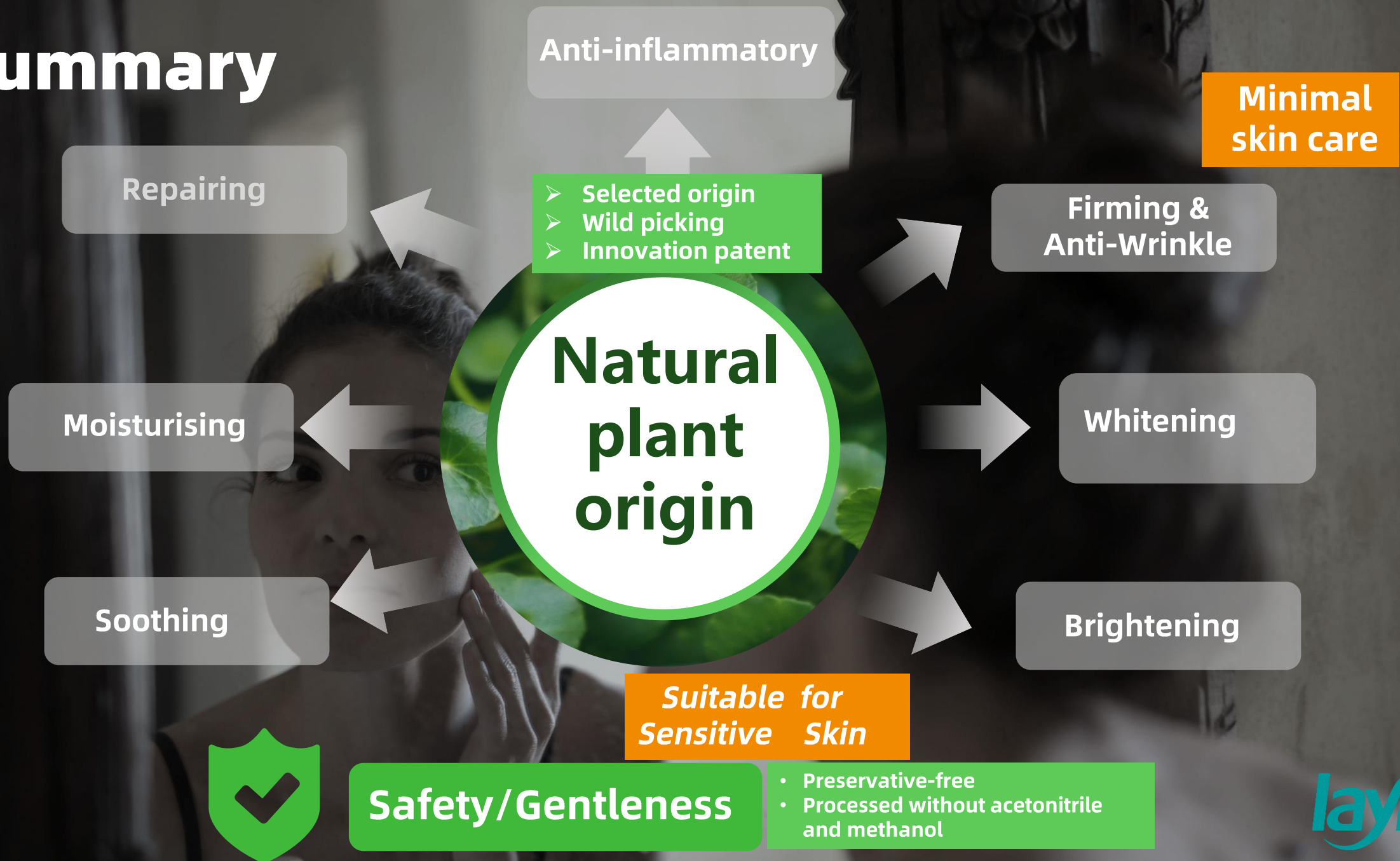
05

Applications And Summary

Applications



Summary





THANK YOU!

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