RINATI LABS

Licorisome™

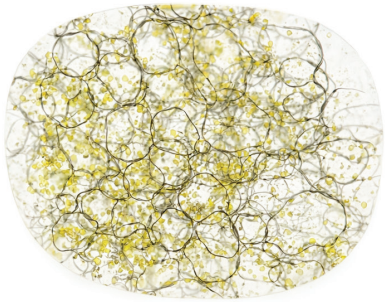
Aseptic Licorice Stem Cell Lysate Rich in Anti-Glycation, Antioxidant & Protein-Protective Bioactives

INCI
Glycyrrhiza Glabra Callus Culture Extract

- Mild scent
- Plant based
- Water soluble

1-5%
Usage level

- 100% natural
- Vegan
- Made in the USA
- cGMP-produced



Licorisome, powered by licorice plant stem cells, our advanced extract helps defend skin from glycation-induced dullness, promoting a smoother, brighter, and more resilient complexion*.

Traditional Ingredients: Carnosine, N-Acetyl Carnosine, Polyphenols, Ferulic Acid, Niacinamide, Green Tea EGCG, Ginseng, Alpha-Lipoic Acid, Aminoguanidine

Typical Performance Profile: Anti-glycation ingredients are designed to reduce formation of advanced glycation end-products (AGEs) associated with stiffness and visible skin aging.

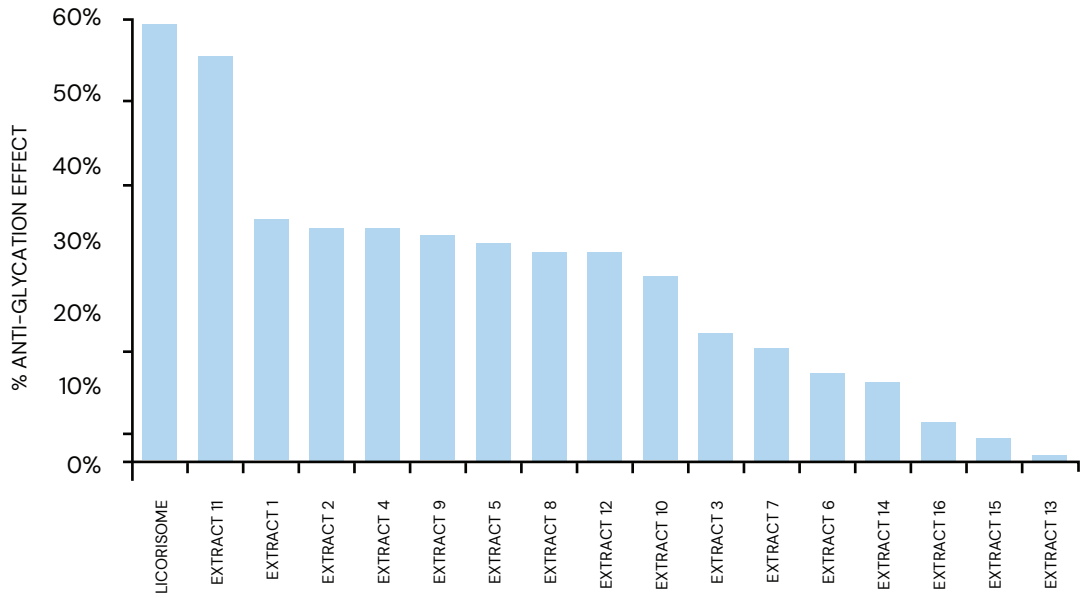
Licorisome Positioning: Licorisome contains metabolites such as ferulic acid derivatives, spermidine, and antioxidant phenolics associated with glycation-stress defense and oxidative protection.

Compound	Primary Anti-Glycation Pathway	Cosmetic-Compliant Functional Description
Ferulic Acid	Inhibition of AGE formation (pentosidine, CML, 3DG, GO, MGO) and suppression of protein crosslinking.	Helps minimize oxidative and glycation-related degradation of skin proteins.
Spermine	Scavenging of reactive carbonyl species and inhibition of glycation driven by sugars and dicarbonyls.	Helps reduce the impact of glycation-related stress on skin proteins.
Spermidine	Inhibition of hexose-, triose-, and dicarbonyl-driven glycation; prevents AGE-induced protein damage.	Supports protection against glycation-associated protein modification.
p-Coumaric Acid	Inhibition of fructosamine formation, AGE fluorescence, and collagen crosslinking under high-glucose conditions.	Helps limit oxidative cross-linking and glycation-related stiffening of skin proteins.
Vanillic Acid	Suppression of glucose-driven protein glycation and reduction of AGE accumulation in tissue.	Helps protect against glycation-related oxidative stress in skin.
Phloretin	Reduction of glycoxidative stress via strong antioxidant action and Nrf2/AMPK pathway activation (indirect antiglycation).	Helps protect skin from oxidative conditions associated with glycation.

*Inspired by traditional Ayurvedic practices (a centuries-old system of herbal wellness used in India and Southeast Asia) and supported by in vitro testing. These statements have not been reviewed by the FDA.
This product is not meant to diagnose, treat, cure, or prevent any disease

Compound	Primary Anti-Glycation Pathway	Cosmetic-Compliant Functional Description
Gentisic Acid	Free-radical scavenging and reduction of oxidative pathways contributing to glycoxidation.	Helps reduce oxidative reactions linked to glycation stress.
Daidzein	Antioxidant/anti-inflammatory reduction of oxidative stress influencing glycoxidative pathways (no direct antiglycation).	Supports maintenance of protein integrity in oxidative, glycation-prone environments.
Arginine	Partial glycation reduction when co-administered with spermidine; reduces HbA1c and oxidative stress markers.	Helps reduce glycation-related interactions through amine-buffering support.

LICORISOME IN VITRO ANTI-GLYCATION ACTIVITY



Protein glycation is a harmful process that leads to the formation of advanced glycation end-products (AGEs), which accelerate aging and contribute to wrinkles, tissue stiffness, and chronic disease. The anti-glycation activity of plant calli was assessed by measuring inhibition of human serum albumin glycation. AGE formation was measured by fluorescence excitation at 360/40 nm and emission at 460/40 nm. Activity was expressed as percent inhibition relative to glycated controls. Following 30 days of incubation, **Licorisome showed 59% anti-glycation activity of human serum albumin.**

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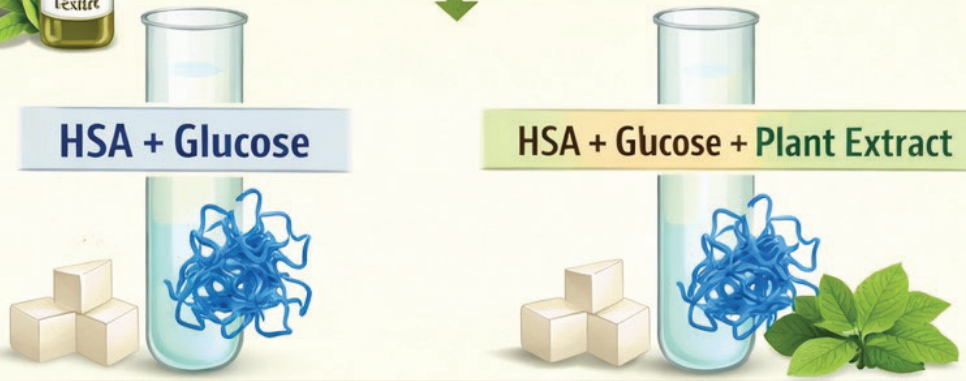
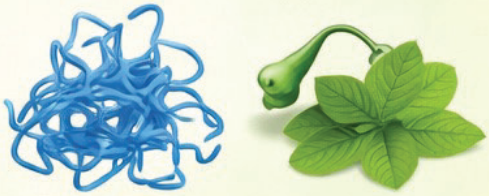
Anti-Glycation Effects

of Plant Extract on Human Serum Albumin & Glucose

Experimental Setup



Incubation at 37°C (2–3 Weeks)

Control (Without Plant Extract)	With Plant Extract
	
• Protein Cross-Linking	✓ Less Cross-Linking
• Fluorescence Increase	✓ Lower Fluorescence
• Oxidative Stress	✓ Antioxidant Protection

Anti-Glycation Benefits

↓ AGEs Formation | ↓ Oxidative Stress | ↓ Protects Proteins

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