Technical specifications

• *Gladback 72230*

PROPERTIES	Effective purified botanical ingredient to diminish the effects of aging and menopause on the skin. It helps the skin to keep the hyaluronic acid, increases the skin thickness, its luminosity and microcirculation. Anti-wrinkle effect.
ACTIVE MOLECULES	Polysaccharide *(Poria cocos)*
APPEARANCE	Transparent liquid Light grey-brown to grey brown color
SOLUBILITY	Soluble in aqueous solutions Insoluble in oil
RECOMMENDED DOSE	3-6%

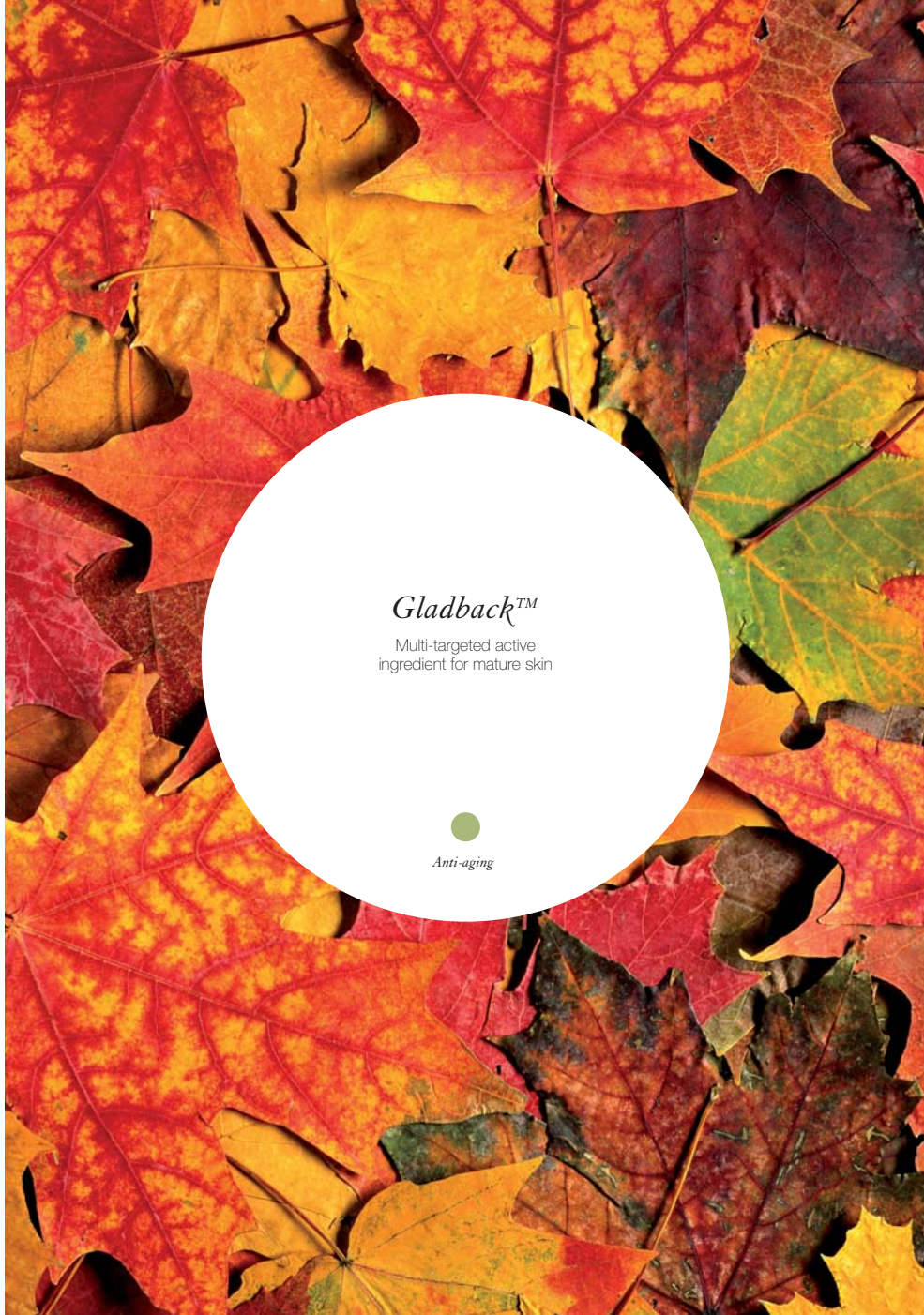
Formulation

• *Time Reversing Treatment*

	INCI / PCPC	% (w/w)
A	Glyceryl Stearate Citrate	2.00
	Glyceryl Stearate, Ceteareth-20	2.75
	Shea Butter Oil	5.00
	Rosehip Seed Oil	1.00
	Tocopheryl Acetate	0.50
	Polysilicone-15	3.00
	Triisostearin	2.00
B	Aqua (Water)	76.25
	Tetrasodium Glutamate Diacetate, Sodium Hydroxide, Aqua (Water)	0.20
	Sodium Polyacrylate	0.30
C	Acrylamide/Ammonium Acrylate Copolymer, Polyisobutene, Polysorbate 20	1.00
D	Phenoxyethanol, Ethylhexylglycerin	0.80
E	Parfum (Fragrance)	0.20
F	**GLADBACK™**	**5.00**

Cosmetic applications

- Facial and corporal care for mature skins
- Global anti-aging lines
- Treatment make-up



GLADBACK™
MULTI-TARGETED ACTIVE INGREDIENT FOR MATURE SKIN

Gladback™ is a purified and standardized fraction of *Poria cocos* for mature and/or menopause skins. It is a multi-functional active ingredient which increases skin thickness, radiance and microcirculation, and it also reduces the appearance of wrinkles typical of aging.

TARGET DERMAL STRUCTURES OF GLADBACK™

- **Hyaluronic acid:** essential glycosaminoglycan of the dermal and epidermal extracellular matrix, which acts directly on tissue cohesion and repair.

  CD44: trans-membrane glycoprotein which acts as the main receptor of hyaluronic acid and maintains its homeostasis. The interaction between the hyaluronic acid and this receptor facilitates cellular differentiation and strengthens tissue union.

  During aging and menopause the expression of the CD44 receptor and hyaluronic acid diminishes, leading to a reduced skin thickness, firmness and cell renewal.

  Gladback™ increases the expression of this receptor, improving the hyaluronic acid binding in the epidermis and dermis.

- **Collagen IV:** maintains the skin mechanical stability as it is a key element of the dermal-epidermal junction.

  Age diminishes collagen and menopause accentuates even more this loss.

  Gladback™ boosts the expression of collagen IV and strengthens skin stability.

- **SPRR:** family of small proteins rich in prolin, located in the dense envelope of the corneocytes (epidermis).

  Due to aging and menopause these proteins become overexpressed, and this causes important skin imbalances.

  Gladback™ reduces the expression of SPRR and improves the appereance of mature skin.

Gladback™ reverts the effects of aging in skin thickness, microcirculation, radiance and firmness. The result is a younger and more radiant skin.

Poria

- Well-known fungus in Asian traditional medicine as purifying, antioxidant and softening.
- The part used is the **sclerocia** (mycelium), which mainly contains polysaccharides (pachyman) and triterpenes.

In vitro test, gene expression

In vitro study on human keratinocytes.

The action of **Gladback™** on some **genes related to skin aging** was confirmed. The aim was to verify the stimulating or inhibiting capacity on the expression of some of the involved genes.

Elements and genes involved in skin aging	Effect on expression vs control (%)*
Hyaluronic acid receptor (CD44)	182
SPRR protein (1A)	57
SPRR protein (1B)	55
SPRR protein (A2)	67
Collagen IV (COL4A2)	150

*Control value is considered as 100%.

As it can be seen in the next table, the application of Gladback™:

- Increases the expression of hyaluronic acid receptor (CD44) and collagen IV, both beneficial for the skin
- Clearly inhibits SPRR family, proteins which increase their activity during aging and cause skin alterations

In vivo test

- 18 volunteers, between 50 and 65 years old
- Active formula (5% Gladback™) on one half of the face and placebo on the other
- Two daily applications, 56 days
- Measurements at D0 and D56 of skin thickness, luminosity and microcirculation
- Images for visual evaluation of anti-wrinkle effect

Anti-wrinkle effect

Image before treatment, D0

Image after treatment with Gladback™, D56

Images of the skin thickness

Image before treatment, D0

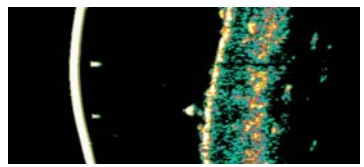
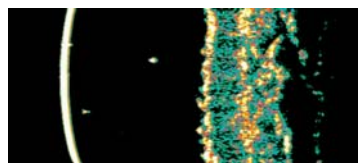


Image after applying Gladback™, D56



Results

- Skin thickness: 8% increase
- Luminosity
  0.55% average enhancement
  1.4% maximum increase
- Microcirculation
  0.53% average enhancement
  6.8% maximum increase
- Visible decrease of wrinkles