

GINKGO BILOBA EXOSOMES

Code: EXO-6



Definition: Exosomes are small, nanometer-sized extracellular vesicles secreted by cells. They act as messengers, transporting proteins, nucleic acids, and other molecules to other cells. They play a crucial role in intercellular communication and various biological processes. They are generated from late endosomes, which are intracellular compartments, through a process called multivesicular body (MVB) formation. Intraluminal vesicles form in the lumen of the endosome and subsequently fuse with the cell membrane to be released as exosomes.

Exosomes are not simple empty sacs; they contain various molecules, such as proteins, lipids, nucleic acids (mRNA, miRNA, etc.), and metabolites.

Cosmetic properties: Ginkgo biloba exosomes, like the extract of this plant, have beneficial cosmetic properties for the skin, mainly due to their antioxidant, anti-inflammatory, and regenerative properties. These benefits translate into brighter, firmer, and more youthful-looking skin. They protect the skin from free radicals, responsible for premature aging, thanks to their flavonoid and terpenoid content.

They help reduce inflammation and redness, soothing sensitive or irritated skin.

They stimulate the production of collagen and elastin, improving skin elasticity and firmness, and promoting cell renewal.

They increase moisture retention in the skin, improving its hydration and softness.

By promoting better blood circulation, they can help reduce the appearance of dark circles and improve skin tone.

Thanks to their antioxidant and regenerative properties, they help combat signs of aging such as wrinkles and fine lines.

**References:**

1 Ginkgo biloba leaves extract's cosmeceutical evaluation: a preliminary assessment of human volunteers toward achieving improved skin conditions and rejuvenation Ahmed A. H. Abdellatifa,b , Hamdoon A. Mohammedc,d , Ali M. Al-Khalafa , Omar Khana , Mahmoud A. H. Mostafae,f , Rwaida A. Al Haidarie , Hesham H. Tahag and Riaz A. Khan

2 Ginkgo biloba extract ameliorates skin fibrosis in a bleomycin-induced mouse model of systemic sclerosis: Beomgu Lee; Jong Seong Roh; Hoim Jeong; Yerin Kim; Jihyeon Lee; Changun Yun.

3 Therapeutic Values of Exosomes in Cosmetics, Skin Care, Tissue Regeneration, and Dermatological Diseases by Abhimanyu Thakur ,Disheet Shah,Deepika Rai,Diana Carolina Parra, Spoorthy Pathikonda,Svetlana Kurilova andAlma Cili.

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Date of last amendment: 22.03.2025

INCI name: GINKGO BILOBA LEAF EXTRACT (AND) GINKGO BILOBA LEAF VESICLES (AND) PROPANEDIOL (AND) SODIUM LEVULINATE (AND) XANTHAN GUM (AND) POTASSIUM SORBATE.

Description: Ginkgo Biloba extract enriched with exosomes isolated by ultra-filtration of said concentrated extract and stabilized in a natural xanthan gum fluid gel.

Properties: It has antioxidant properties, which help neutralize free radicals and reduce oxidative stress. Furthermore, exosomes can stimulate collagen production, improve skin elasticity, and boost regeneration, potentially reducing wrinkles and fine lines.

COMPOSITION (INCI NAME)	% (Weight)	CAS #
Ginkgo Biloba Leaf Extract (and) Ginkgo Biloba Leaf Vesicles	94,150	90045-36-6 (and) ---
Xanthan Gum	0,300	11138-66-2
Preservatives:		
Caprylyl Glycol	5,000	504-63-2
Sodium Levulinate	0,400	19856-23-6
Potassium Sorbate	0,150	24634-61-5

Concentration of Exosome Particles	Greater than 10 billion particles/ml. Measurement method: NTA (Nanoparticle Tracking Analysis). Equipment: Nanosight NS300 (MALVERN PANALYTICAL, U.K.)
Particle size	30 nm -500 nm (NTA Method: Nanoparticle Tracking Analysis)
Extraction method:	Ultra-Filtration.
Net surface charge of the particle:	Negative.
Aspect:	Semi-translucent to opalescent fluid gel.
Color:	Yellow to brown.
Odor:	Pleasant.
pH:	4,00 – 6,00 (25°C) (USP XLIV and sub. updates).
Density:	0,980 – 1,050 (pycnometer) (20°C) (USP XLIV and sub. updates).
Dry residue:	3 gr % minimum (0,5 gr. 1 hour 110° C).
Microbiological control:	Mesophilic bacteria: less than 100 CFU/gr. Moulds & yeast: less than 20 CFU/gr. No pathogens.
Observation:	The product may form flocs or precipitates after long periods of storage. These are easily dispersed with gentle agitation.

Keep refrigerated (5-15°C). Do not freeze. Protect from light. Shake before use.

EXTERNAL COSMETIC USE