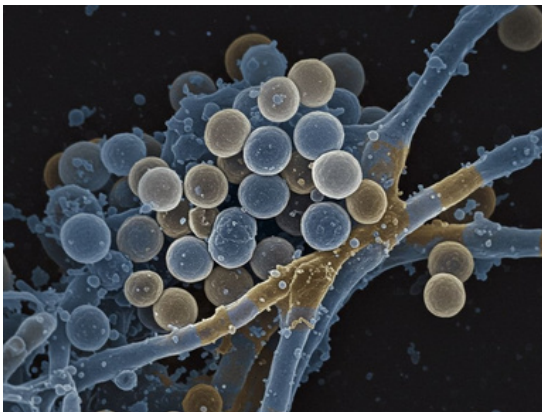
GREEN TEA EXOSOMES

Code: EXO-5



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: Green tea exosomes possess intense antioxidant and free radical scavenging activity, helping to combat premature skin aging.
They protect skin cells from damage caused by environmental stressors such as UV radiation and pollution.
They help reduce oxidative stress and soothe irritation.
They may help modulate inflammatory pathways, potentially reducing redness, irritation, and other signs of inflammation in the skin.
Studies suggest that green tea exosomes may improve hyperinflammatory skin conditions and help suppress skin aging caused by inflammatory reactions.
They may help strengthen the skin's natural barrier function, making it more resistant to external aggressors.
They contribute to improved skin hydration, resulting in a smoother, healthier complexion.

References:

1 Applications of Tea (Camellia sinensis) and its Active Constituents in Cosmetics Wojciech Koch , Justyna Zagórska , Zbigniew Marzec and Wirginia Kukula-Koch Chair and Department of Food and Nutrition, Medical University of Lublin, Chodźki str., Poland and Department of Pharmacognosy, Medical University of Lublin, Chodźki str., 20-093 Lublin, Poland; Academic, Editor: Saverio Bettuzzi Received: 8 November 2019; Accepted: 22 November 2019; Published: 24 November 2019

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INCI name: CAMELLIA SINENSIS LEAF EXTRACT (AND) CAMELIA SINENSIS LEAF VESICLES (AND) PROPANEDIOL (AND)SODIUM LEVULINATE (AND) XANTHAN GUM (AND) POTASSIUM SORBATE.

Description: Green Tea Extract enriched with Exosomes isolated by ultra-filtration of said concentrated extract and stabilized in a natural fluid gel of xanthan gum.

Properties: It has antioxidant properties, helps 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 #
Camellia Sinensis Leaf Extract (and) Camellia Sinensis Leaf Vesicles	94,150	84650-60-2 (and) ---
Xanthan Gum	0,300	11138-66-2
Preservatives:		
Propanediol	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:	Brown.
Odor:	Pleasant.
pH:	4,00 – 6,00 (25ºC) (USP XLIV and sub. updates).
Density:	0,980 – 1,050 (pycnometer) (20ºC) (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