Lipoid
Kosmetik

LIPOID Liposome C Eco | Natural Phospholipids

We make beauty natural.

Liposomal Ascorbyl Glucoside – For Innovative Natural Cosmetics

Encapsulation of cosmetic active ingredients in skin-friendly particles potentiates their skin interaction and results in a superior and long-lasting cosmetic effect.

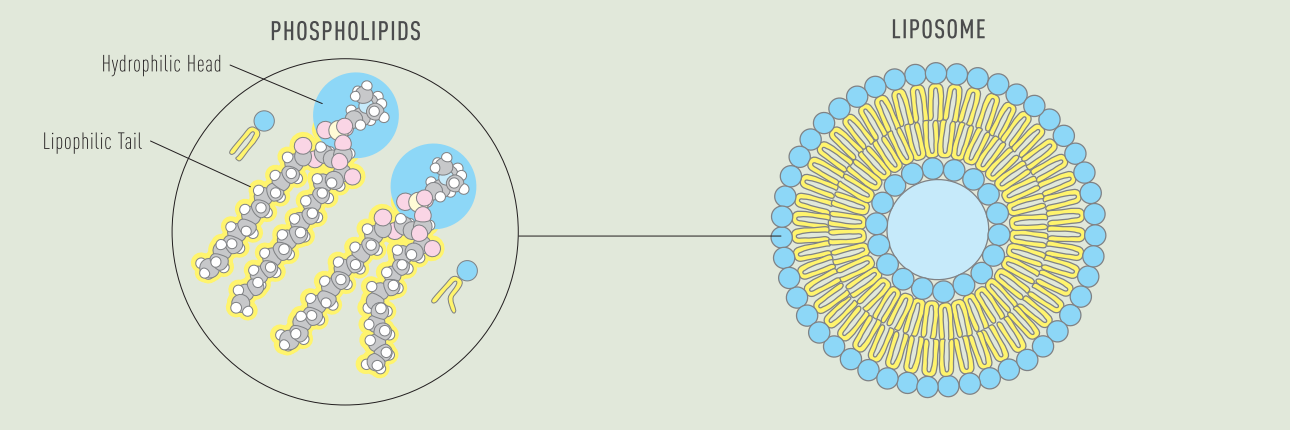
LIPOID Liposome C Eco is an innovative natural product, which combines the cosmetic benefits of ascorbyl glucoside (2-O-alpha-D-glucopyranosyl-L-ascorbic acid) with the excellent skin penetrating and rejuvenating properties of phospholipids and liposomes [1]. Ascorbyl glucoside is converted into ascorbic acid (Vitamin C) in the skin, providing a long-lasting cosmetic effect [2].

Vitamin C is a powerful antioxidant, neutralizing and removing harmful free radical molecules and enhancing collagen formation. It inhibits the enzyme tyrosinase, thereby reducing melanogenesis and counteracting skin hyperpigmentation [3]. The ready-to-use formulation contains liposomes with a particle size of around 40–120 nm and is free of preservatives. The liposomes can be easily combined with any cosmetic formulation.

An *in vivo* study with a Chroma Meter showed a clear brightening of age spots treated with LIPOID Liposome C Eco compared to a placebo.

In a separate study with a Cutometer®, LIPOID Liposome C Eco showed an additional improvement of the skin firmness.

Overall, LIPOID Liposome C Eco is the ideal ingredient for fading of age spots, skin brightening, and formulation of anti-aging products.



Schematic illustration of phospholipids and a liposome.

READY-TO-USE LIPOSOME CONCENTRATE

Pre-formed liposomes, free of preservatives, can simply be added to any formulation

LIPOSOMAL ENCAPSULATION

Enhanced penetration into the skin

IMPROVED COSMETIC EFFECT

Superior skin brightening and rejuvenation

Product Specifications

Liquid concentrate of pre-formulated liposomes from soybean phospholipids (non-GMO) with encapsulated ascorbyl glucoside for better skin interaction and penetration.

In vivo Activity | LIPOID Liposome C Eco Brightens Age Spots

Objective

- To examine the efficacy of LIPOID Liposome C Eco in brightening of age spots compared to placebo and initial conditions.

Technique

- Chroma Meter: A sensitive tool for accurate measurement of skin color by means of light reflection. A brightening of the skin results in higher L* values.

Study Details

Design	Open, placebo-controlled, randomized *in vivo* study
Test Panel	20 female volunteers with healthy skin, aged between 54 and 83 years
Test Substances	Verum formulation: hydrogel with LIPOID Liposome C Eco Placebo: hydrogel formulation without active
Application Procedure	Back of the hand/forearm (half-side trial); twice daily (morning, evening) ca. 2 mg/cm^2 for 56 days
Measuring Method	Determination of brightening of age spots and surrounding tissue by means of a Minolta Chroma Meter CR-400 (Minolta, Japan)
Measuring Time Points	Day 0, 28, and 56

Results

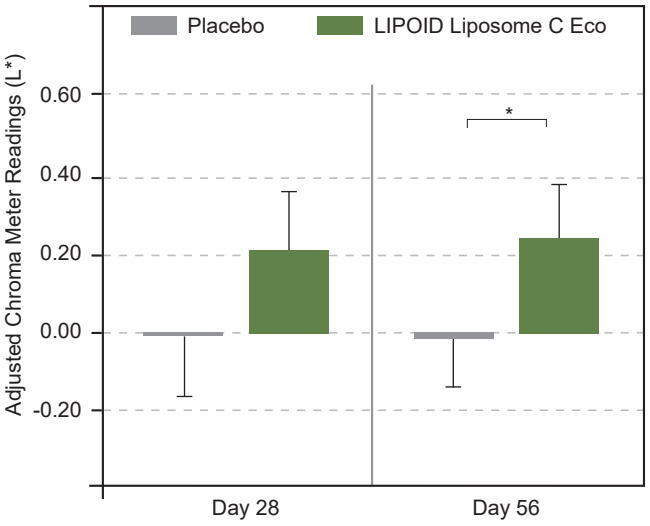


*Fig. 1: Net age spot brightening effect of a LIPOID Liposome C Eco containing formulation (verum) in comparison to placebo. n = 20, Mean + SEM; * = p < 0.05.*

After 28 days of treatment of age spots with LIPOID Liposome C the skin brightness increased significantly ($p<0.05$) compared to the initial conditions. Moreover, the age spot brightening effect of LIPOID Liposome C Eco was significantly greater compared to the placebo ($p<0.05$) after 56 days (Fig. 1).

Conclusion

The benefit of LIPOID Liposome C Eco was successfully demonstrated in an *in vivo* study on the skin of female volunteers. Skin brightness measurement with a Chroma Meter showed a significant brightening effect on age spots.

LIPOID Liposome C Eco shows a significant brightening effect on age spots.

In vivo Activity | LIPOID Liposome C Eco Increases Skin Firmness

Objective

- To measure the effect of the product on the biomechanical properties of the skin compared to untreated skin and placebo.

Technique

- Cutometer®: The measuring principle is based on the suction method. Negative pressure is produced with a pump in the device and pulls the skin into the opening of the measuring probe. After the pressure is removed, the skin tries to return to its original state, and this process is recorded optically.

Study Details

Design	Open, placebo-controlled, randomized *in vivo* study
Test Panel	20 female volunteers with healthy skin, age between 35 and 65 years
Test Substances	Verum formulation: hydrogel with LIPOID Liposome C Eco Placebo: hydrogel formulation without active
Application Procedure	Inner side of forearms; twice daily (morning, evening) ca. 2 mg/cm^2 for 14 days
Measuring Method	Cutometer® MPA 580 (Courage and Khazaka, Cologne, Germany)
Measuring Time Points	Day 0 and 14

Results

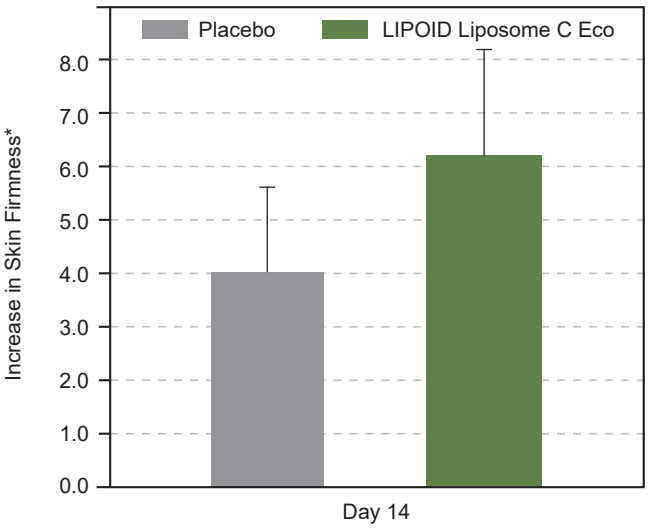


Fig. 2: Relative increase of skin firmness after treatment with a LIPOID Liposome C Eco containing formulation (verum) compared to placebo, n = 20, Mean + SEM.
** Mean Increase in Skin Firmness relative to initial conditions and to untreated [%]*

After 14 days of treatment with LIPOID Liposome C Eco, a statistically significant decrease ($p<0.05$) in Cutometer® readings was observed compared to untreated conditions, indicating an increase in skin firmness. This increase was substantially higher compared to the placebo formulation (Fig. 2).

Conclusion

The benefit of LIPOID Liposome C Eco was successfully demonstrated in an *in vivo* study on the skin of female volunteers. Measurement of skin firmness with a Cutometer® revealed an increase in skin firmness.

LIPOID Liposome C Eco considerably increases skin firmness.

Frame Formulation: Refine Serum with LIPOID H 100-3, LIPOID H 100, LIPOID Liposome C Eco, and HerbaGlow® NRG

Phase	Ingredient	INCI	Function	Supplier	% w/w
A	Deionized Water	Aqua (Water)			ad 100
	Solagum™ AX	Acacia Senegal Gum, Xanthan Gum	Thickener	Seppic	0.20
	Corn Starch	Zea Mays (Corn) Starch	Thickener		2.00
	Glycerin 86.5 %	Glycerin, Aqua (Water)	Humectant		5.00
	LIPOID H 100-3	**Hydrogenated Phosphatidylcholine**	**Emulsifier**	**Lipoid Kosmetik**	**1.50**
	Cosphaderm® Dicapo natural	Caprylyl Glycol, Propanediol, Glyceryl Caprylate	Preservative	Cosphatec	0.70
	Cosphaderm® Pentiol	Pentylene Glycol	Humectant	Cosphatec	3.75
B	Behenyl Alcohol	Behenyl Alcohol	Consistency enhancer		1.00
	Almond Oil	Prunus Amygdalus Dulcis (Sweet Almond) Oil	Emollient		3.00
	Castor Oil	Ricinus Communis (Castor) Seed Oil	Emollient		2.50
	MCT	Caprylic/Capric Triglyceride	Emollient		3.00
	Baumwoll Soft Butter™	Gossypium Herbaceum (Cotton) Seed Oil, Hydrogenated Vegetable Oil, Tocopherol	Emollient	Greentech	1.50
	LIPOID H 100	**Phosphatidylcholine, Tocopherol**	**Active ingredient**	**Lipoid Kosmetik**	**1.00**
	Covi-ox® T-90 EU C	Tocopherol	Antioxidant	BASF	0.20
C	**LIPOID Liposome C Eco**	**Glycerin, Aqua (Water), Ascorbyl Glucoside, Lecithin, Sodium Hydroxide, Tocopherol**	**Active ingredient**	**Lipoid Kosmetik**	**5.00**
	HerbaGlow® NRG	**Propanediol, Aqua (Water), Capparis Spinosa Bud Extract, Rhodiola Rosea Root Extract, Morus Nigra Leaf Extract**	**Active ingredient**	**Lipoid Kosmetik**	**1.00**
	PÖ Luxury Cocoa Butter P0241528	Parfum (Fragrance), Hexyl Cinnamal, Geraniol	Fragrance	Frey & Lau	0.20
D	Sodium Hydroxide	Sodium Hydroxide	Neutralizing agent		q.s.

Procedure

- Mix components of **A** at 75 °C
- Mix components of **B** at 70 °C
- Add **LIPOID H 100** and Covi-ox® T-90 EU C and stir until homogeneous
- Add **B** to **A** and homogenize
- Cool down while stirring
- Add **C** to **AB**
- Adjust pH with **D** to 6.5 if necessary

Technical Data

- Appearance: white to very slightly beige, thin lotion
- pH value: approx. 6.5
- Viscosity value: ~1000 mPas (Anton Paar ViscoQC 300-R Sp 4/100 rpm/25 °C)

General Application

- LIPOID Liposome C Eco can be added easily to the formulation during the cooling phase
- Use level: 1 – 5 %
- Recommended pH range: 5 – 8
- For formulations with LIPOID Liposome C Eco use only deionized water

Storage & Stability

- Store in closed containers at +5 ± 3 °C.
- LIPOID Liposome C Eco is stable for at least 18 months when stored under the recommended storage conditions

Suitable for

- Advanced skin care products
- Improved performance of Vitamin C
- Liposomal formulations

Product Characteristics & Appearance

- COSMOS-approved raw material
- Yellow-brown liquid
- Liposomal dispersion

Regulatory *(Further regulatory documents upon request)*

LIPOID Liposome C Eco

INCI	Glycerin, Aqua (Water), Ascorbyl Glucoside, Lecithin, Sodium Hydroxide, Tocopherol
EU Cosmetic Regulation	The product complies with the EU Cosmetic Regulation (EC) No. 1223/2009
China INCI	All INCIs are listed in the current Inventory of Existing Cosmetic Ingredients in China (IECIC)
EU REACH	The product, i.e. its substances conform to the Regulation (EC) No. 1907/2006
China REACH	All ingredients conform to the legislation of China REACH
Safety	We affirm to the best of our knowledge that the product is non-toxic, safe, and suitable for use in skin and hair cosmetics at the recommended use levels
Non-GMO	The product is made from raw materials of non-GMO origin. GMO labeling according to European law is not required
CMR	The product does not contain substances classified as CMR under the Regulation (EC) No. 1272/2008 (CLP)
Vegan	All products can be used in vegan formulations
Palm oil	The product does not contain palm/palm kernel oil or its derivatives
COSMOS	Raw material verified by ECOCERT GREENLIFE, conforms to the COSMOS standard

VEGAN · NON-GMO · PALM OIL FREE · NO CHEMICAL ADDITIVES · MADE IN GERMANY

References

[1] Van Hoogevest, P. and Fahr, A., "Phospholipids in cosmetic carriers." *Nanocosmetics,* 95 – 140 (2019).

[2] Kumano, Y., Sakamoto, T., *et al.,* "*In vitro* and *in vivo* prolonged biological activities of novel vitamin C derivative, 2-O-alpha-D-glucopyranosyl-L-ascorbic acid (AA-2G), in cosmetic fields." *Journal of Nutritional Science and Vitaminology*, 44(3), 345 – 359 (1998).

[3] Enescu, C. D., Bedford, L. M., *et al.* "A review of topical vitamin C derivatives and their efficacy." *Journal of Cosmetic Dermatology,* 21.6, 2349 – 2359 (2022).

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Representatives in many other countries.

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