

LIPOID Liposome Basic | Natural Phospholipids



Pre-formulated  
High-Quality Liposomes



We Invest in Quality.

# Formulating High-Quality Supplements Can Be So Easy

## The Basics of Liposomes

The LIPOID Liposome Basic products are high-quality pre-formulated liposome concentrates for an unequalled formulation with your nutrients of choice. The liposomes are made up of 100 % natural non-GMO soybean or sunflower phospholipids.

These amphiphilic molecules consist of a hydrophilic and lipophilic part. Therefore, they self-organize in water as bilayer structures with a lipid shell and an aqueous core (Fig. 1).

Liposomes can help to improve the bioavailability of nutrients and are the vehicle of choice when it comes to increased natural absorption of, e.g., vitamin C<sup>[1]</sup>.

By reducing the rate of oxidation, liposomal formulations can also improve the stability of active ingredients<sup>[2]</sup>. Furthermore they help to reduce gastrointestinal irritation and improve the digestibility of nutrients<sup>[3]</sup>.

## Why Quality Makes the Difference

Lipoid meets the highest standards in terms of raw materials and processes. Only natural and well selected ingredients are chosen for our formulations.

All LIPOID Liposome Basic products are free of preservatives and ethanol. Thanks to their specific formulation, the liposomes are self-preserving.

The unique properties and the great stability of LIPOID Liposome Basic products are based on their small and uniform particle size (Fig. 2 and 3).

These high grade liposomes result in a transparent appearance and unparalleled miscibility, allowing highest-quality liposomal formulations (Fig. 4).

The pleasant, slightly sweet taste of LIPOID Liposome Basic products completes their excellent sensory profile.

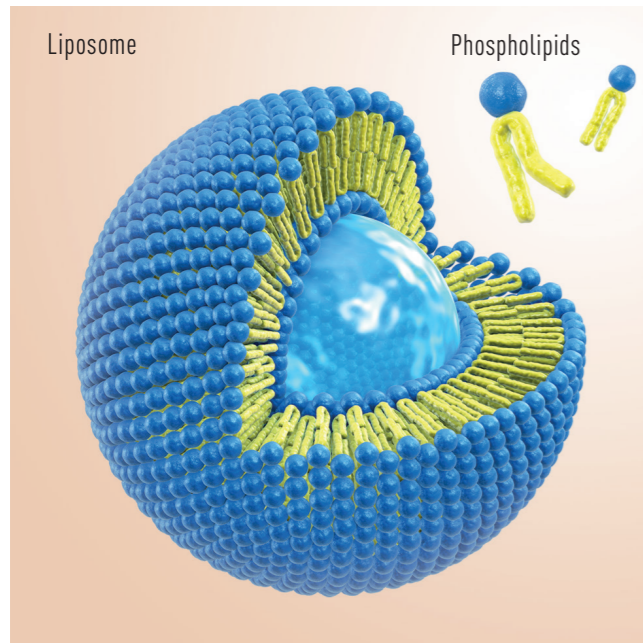


Fig. 1: Schematic diagram of phospholipids and a liposome

## Dilution with Water

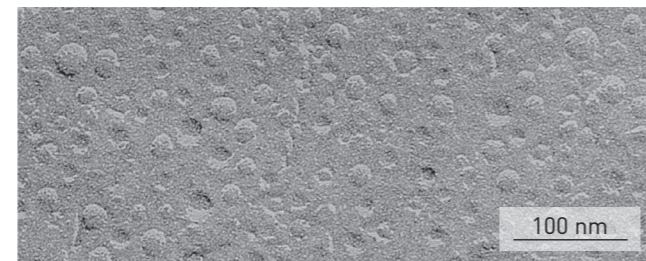


Fig. 2: Electron micrograph of LIPOID Liposome Basic

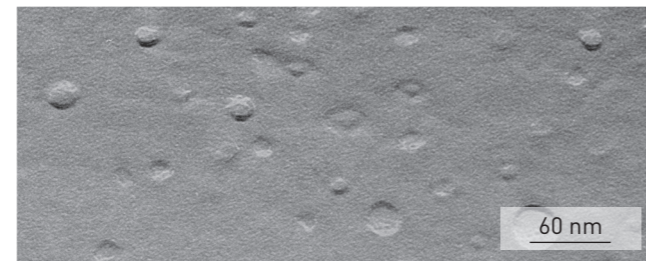


Fig. 3: Electron micrograph of diluted LIPOID Liposome Basic



Fig. 4: Miscibility of LIPOID Liposome Basic with water and transparent appearance of the final product.

PRODUCT	DESCRIPTION	APPLICATIONS	APPEARANCE
<b>LIPOID Liposome Basic</b>	Pre-formulated liposomes with 15 % phospholipids from non-GMO soybean in glycerol		
<b>LIPOID Liposome Basic H</b>	Pre-formulated liposomes with 10 % phospholipids from sunflower (non-GMO) in glycerol		

## Versatile Applications

LIPOID Liposome Basic products can be mixed with a wide range of hydrophilic nutrients without the use of expensive technical equipment. It allows quick and easy development of individual liposomal products (see table).

The non-GMO-soybean-based product LIPOID Liposome Basic is ideal for advanced formulations and

challenging nutrients, whereas the sunflower-based product LIPOID Liposome Basic H provides an efficient solution for clean label supplements. Both products can be used pure, diluted or as an add-in for your formulation. Please contact us for more information or application tips.

### Liposomal Melatonin Drops – based on LIPOID Liposome Basic

Phase	Ingredient	% w/w
A	Melatonin	0.4
A	LIPOID Liposome Basic	40
B	Glycerin (85%)	59.6

#### Procedure

- Add Melatonin to LIPOID Liposome Basic at 45-50 °C and stir until completely dissolved
- Add B to A while stirring at 45 °C

#### Technical Data

- Appearance: yellowish, translucent
- Viscosity: honeylike
- Liposome size: around 80-120 nm

### Liquid Liposomal Formulation with Vitamin C – based on LIPOID Liposome Basic H

Phase	Ingredient	% w/w
A	Vitamin C (Sodium Ascorbate)	20
A	Deionized Water	49.85
A	Potassium Sorbate	0.15
B	LIPOID Liposome Basic H	30
C	Sodium Hydroxide	q.s.

#### Procedure

- Dissolve Vitamin C and Potassium Sorbate in water
- Add A to B while stirring
- Adjust pH value of AB to 6.0 with C

#### Technical Data

- Appearance: yellowish, clear
- pH value: approx. 5.5
- Liposome size: around 60 - 100 nm

100 % NATURAL	PRESERVATIVE FREE	PLEASANT TASTE
TRANSPARENT APPEARANCE	EASY TO HANDLE	EXCELLENT MISCIBILITY

### Regulatory *(Further regulatory data upon request)*

Safety	We affirm that the product is safe and suitable for the intended use.
Vegan	The product is declared vegan.
Non-GMO	The product meets the non-GMO standards set by Regulation (EC) No. 1829/2003.
Palm Oil Free	The product does not contain palm oil.
Manufacturing	The product is manufactured in Germany.



NON-GMO



VEGAN



NO PALM OIL



GLUTEN-FREE



LACTOSE-FREE



MADE IN GERMANY

### References *(Additional references upon request)*

- [1] Davis, J., Paris, H., *et al.*, Liposomal-encapsulated ascorbic acid: Influence on vitamin C bioavailability and capacity to protect against ischemia-reperfusion injury. *Nutrition and Metabolic Insights*, 9, 25 (2016).
- [2] Chaves, M. A., Ferreira, L. S., *et al.*, Current applications of liposomes for the delivery of vitamins: a systematic review. *Nanomaterials*, 13(9), 1557 (2023).
- [3] Cryer, B., Bhatt, D., *et al.*, Low-dose aspirin-induced ulceration is attenuated by aspirin-phosphatidylcholine: A randomized clinical trial. *The American Journal of Gastroenterology*, 106(2), 272 (2011).



#### Video

*Dissolving vitamin B<sub>2</sub> in LIPOID Liposome Basic + dilution in water*

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REUSAGE  
OF WASTE

Representatives in many other countries.

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