

PhytoSolve® - Lipoid's Innovative Solubilization Technology

What is PhytoSolve®?

PhytoSolve® is a unique, all-natural solubilization technology for water-insoluble nutrients based on highly purified phospholipids derived from lecithin ^[1]. Phospholipids are natural emulsifiers that are soluble in water or oil. Furthermore, phospholipids are a crucial part of the cell membrane of living organisms and are responsible for the uptake of dietary fat in the human body.

This metabolism can be mimicked to enhance the uptake of lipophilic ingredients such as lipophilic vitamins or Q10 ^[2,3]. This mimicry does not only increase the absorption of nutrients in the body and thus the bioavailability but also improves the stability of the precious ingredients.

The mechanism behind: Phospholipids form a water-soluble shell around the water-insoluble components and make the entire system water-soluble. This is called emulsification and is shown in Fig. 1.

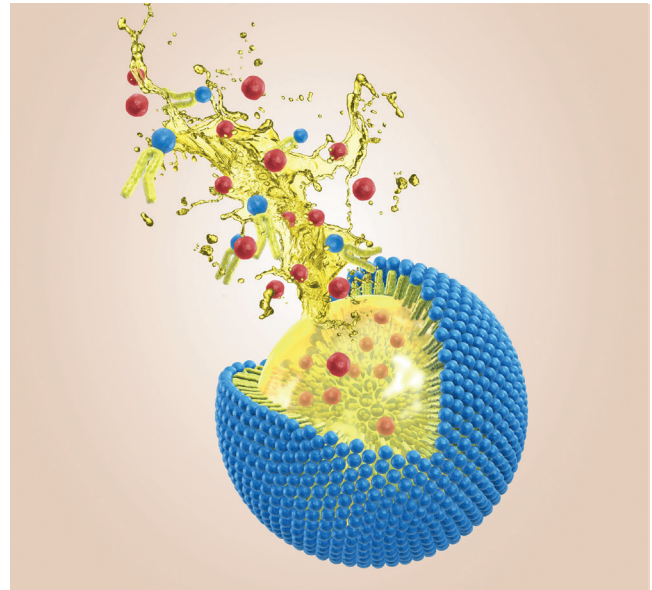


Fig. 1: Schematic depiction of the phospholipid shell and the lipophilic core.

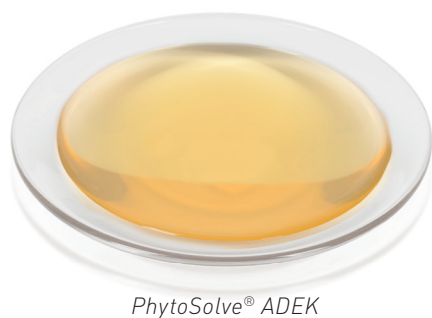


Fig. 2: PhytoSolve® ADEK in water

Key advantages of PhytoSolve®:

- Versatile solubilization platform
- Enhanced bioavailability
- Long-term stability
- Sweet taste and transparent appearance
- Easily miscible with water, juice, milk
- Versatile application options such as sprays or gummies
- Without chemical preservatives

PhytoSolve® Product Portfolio	DESCRIPTION	APPLICATIONS
PhytoSolve® ADEK	Hydrophobic vitamin booster	
PhytoSolve® Astaxanthin	Nature's strongest antioxidant ^[4]	
PhytoSolve® Q10	Energy power plants of human cells ^[5]	
PhytoSolve® Ubiquinol	The more bioactive form of Q10	
PhytoSolve® Omega D3	Heart health support ^[6]	



PhytoSolve® ADEK



References *(Additional references upon request)*

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- [3] Wajda, R., Zirkel, J., *et al.*, Increase of bioavailability of coenzyme Q10 and vitamin. *European Journal of Medicinal Food*, 10(4), 731 – 734 (2007).
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- [5] Cirilli, I., Damiani, E., *et al.*, Role of coenzyme Q10 in health and disease: An update on the last 10 years (2010–2020). *Antioxidants*, 10(8), 1325 (2021).
- [6] Djuricic, I., Calder, P. C., Beneficial outcomes of omega-6 and omega-3 polyunsaturated fatty acids on human health: An update for 2021. *Nutrients*, 13(7), 2421 (2021).

Lipoid at a glance:

- Natural ingredients and no chemical additives
- Manufacturing in Germany
- GMP and ISO 9001 Certification
- Application- and science-based support



Fig. 3: Lipoid headquarters in Ludwigshafen/Rhine.

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