New Nanoemulsions – not based on Phospholipids - for dermal Drug Delivery of active Ingredients

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Abstract

Sopharcos` encapsulation technology is based on an eatable and skin-friendly emulsifier derived from sunflower which is able to form stable vesicles. Depending on the usage of an additional emollient/oil or stabilizer two different emulsions can be obtained: “Hydro-Tops”, a multiple water-in-oil-in-water nano-emulsion (w/o/w NE) for the encapsulation of hydrophilic / amphiphilic or lipophilic actives and “Lipo-Tops”, an oil-in-water nano-emulsion (NE) for the incorporation of high concentrations of lipophilic components/oils. The “Tops” consist of small nano-sized flexible vesicles (80-200 nm) with unique homogenous size distribution and high encapsulation efficiency.
These carrier systems open the chance to encapsulate a huge variety of different components and to enhance their solubility (e.g. polyphenols), their stability (e.g. vitamins) and their penetration depth into the skin (e.g. proteins or antioxidants) or hair follicles. In comparison to well-known carrier systems like "Liposomes" or "Nanosomes" based on phospholipids - these nanoemulsions allow new strategies for innovative formulations exhibiting improved bioavailability of active ingredients in the skin. Different exemplifications will be presented.

Biography

Guenther Mirsch studied geography and finished with diploma. He worked as an editor at a German scientific journal in Munich for several years. From 1996 until 2009 he worked as freelancer for scientific publications with the focus on biological themes. Since 2010 he is Director Business and Business Development at Sopharcos, Dermal Drug Delivery.