

# Don't trust liposomes in your beauty products

February 19 2013

---

New research shows that liposomes in cremes are not capable of transporting active ingredients into the skin.

Liposomes are small fat capsules, often added to [beauty products](#). According to the beauty industry liposomes are capable of transporting active ingredients deep into the skin and release the active ingredients so that they can alter the skin's structure by rejuvenating and smoothing the skin.

Research from University of Southern Denmark now shows that liposomes are not capable of transporting themselves deep into the skin, and thus they are not capable of transporting active ingredients deep into the skin.

"We have shown that liposomes are destroyed before they enter the skin or very soon after. When a liposome is destroyed, it spills its cargo of active ingredients. Liposomes are therefore not efficient carriers for transdermal delivery", says professor Luis Bagatolli from Membrane Biophysics and Biophotonics Group/MEMPHYS Center for Biomembrane Physics, Department of Biochemistry and Molecular Biology, University of Southern Denmark.

The researchers used the technique RICS (Raster Imaging Correlation Spectroscopy) to investigate how liposomes labeled with two fluorescent colors move once they are applied to the skin.

"Concerted movement of the two colors should provide evidence that the liposomes are intact when they reach their destination under the skin. We did not observe concerted movement after applying the liposomes to the skin", says Bagatolli.

Previous research done with other techniques has indicated that liposomes are efficient carriers.

"Previous research done with a different technique provide some hints, but not conclusive evidence, that liposomes are capable of penetrating the skin. Therefore some scientists have concluded that liposomes are efficient carriers. Now for the first time we have conclusive evidence that this is not the case", explains Luis Bagatolli.

He now advises buyers of beauty products to not trust the claims that liposomes can carry active ingredients into the skin.

Professor Bagatolli is an expert in biological membranes.

"The human [skin](#) is designed to prevent external components to enter the human body. It is natural, that it also prevents [liposomes](#) to enter", he explains.

**More information:** *Journal of Investigative Dermatology*  
[www.nature.com/jid/journal/vao...ull/jid2012461a.html](http://www.nature.com/jid/journal/vao...ull/jid2012461a.html)

Provided by University of Southern Denmark

Citation: Don't trust liposomes in your beauty products (2013, February 19) retrieved 8 May 2024 from <https://medicalxpress.com/news/2013-02-dont-liposomes-beauty-products.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.