PEG脂肪酸甘油酯微乳的制备与表征

Preparation and characterization of microemulsions formulated with PEG fatty acid glycerides

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中文研究概述

研究以PEG脂肪酸甘油酯制备微乳，利用伪三元相图分析油相极性、表面活性剂亲水亲油性、助表面活性剂类型与配比，以及温度、pH和盐浓度对体系的影响。研究条件下较优的主/助表面活性剂配比为2:1。

电镜观察到水包油、油包水及双连续微结构。体系在pH 4至9范围内具有耐受性；烟酰胺递送实验中，微乳表现优于传统乳液。该结果描述递送体系，不代表烟酰胺产品的人体功效。

护肤研发启示

为配方开发连接“体系如何形成”与“活性物如何递送”提供方法。递送表现的提升不能直接换算成美白、保湿等功效提升幅度。

English summary

PEG fatty acid glyceride microemulsions were mapped across oil, surfactant, cosurfactant and environmental conditions. A 2:1 surfactant/cosurfactant ratio was optimal in the tested system.

Microscopy showed several microstructures. The systems tolerated pH 4-9, and niacinamide delivery exceeded a conventional emulsion in the reported experiment, without establishing clinical efficacy.

The work connects formulation structure with delivery experiments; improved transport cannot be translated directly into a percentage improvement in skincare benefits.

研究信息

研究方法：伪三元相图、环境稳定性、电镜观察与烟酰胺递送比较

研究对象：PEG脂肪酸甘油酯微乳及其中烟酰胺

结果对应场景：论文配方组成、环境条件与递送实验

实验范围与结果

- 2:1配比来自所测配方体系，不是所有微乳的通用配方。
- 论文所述烟酰胺递送比较不是人体肤色或保湿效果评价。

出版与来源

本索引由BTN整理，不是出版商原始论文。

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