

# Essential Effect of Stratum Corneum and Its Lipids on Permeability of Oestradiol through Human Skin

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The effect of stratum corneum (SC) and its lipids in human skin permeation was assessed *in vitro* in a diffusion system, combined with the determination of partition coefficients. OE and 1,8-CN were used as the model lipophilic drug and penetration enhancer respectively. The results showed SC constituted the main barrier of OE penetrating through skin, its permeability was controlled by both the tissue resistance and partitioning behaviour of OE in SC. However, OE transporting process between SC and living epidermis did not be found to be the rate-limited factor. Both lipids and cells were responsible for the formation of SC barrier characteristics, but SC lipids may also play a role in solubilization of lipophilic drug in SC, and reversely interact with penetration enhancer, so as to become the possible route and contribute towards the improvement of OE penetration.

**Key words** Stratum corneum (SC); Lipids; Oestradiol (OE); Diffusion coefficients; Partition coefficients; 1,8-Cineole (1,8-CN)

【文摘 001】昆明山海棠化学成分研究 张亮, 张正行, 盛龙生, 安登魁, 吕扬, 郑启泰, 王树春. 药学学报, 1993, 28(1): 32-4

从昆明山海棠 [*Tripterygium hypoleucum* (Levl.) Hutch]根的氯仿提取物中分得三个单体, 经光谱分析鉴定晶 1 为已知物雷藤二萜酸 (triptoditerpenic acid), 晶 2 和晶 3 为新二萜化合物, 分别命名为雷藤二萜酸 B (triptoditerpenic acid B) 和山海棠二萜内酯 A (hypodiolide A)。

【文摘 002】薄层色谱选择性优化新方法及其在药物分析中的应用 胡育筑, 何华, 赖宇红, 倪坤仪. 药学学报, 1993, 28(1): 50-6

提出一套合理的溶剂选择性优化方法及优化指标——逐步登高法和 NRC 优化指标。适用于建立薄层色谱溶剂系统时通过实验迅速确定展开剂的最佳配比。并成功地应用于丹参注射液、人工牛黄和头孢

噻吩钠的薄层色谱展开系统的优化。

【文摘 003】当归对变态反应性炎症的影响 胡娟, 李佩珍, 杭秉茜. 中药材, 1993, 16(1): 39-40

当归水煎剂 (含生药 1 g/ml), 8 g/kg 灌胃对豚鼠 Forssman 皮肤血管炎及大鼠反向皮肤过敏反应具有显著的抑制作用, 且能明显抑制大鼠被动 Arthus 反应。提示当归对 I、II 型变态反应性炎症有抑制作用。

【文摘 004】二十种贝母药材的蛋白质电泳鉴别 刘惠娟, 李萍, 徐珞珊, 徐国钧. 中药材, 1992, 15(11): 23-5

应用 SDS-聚丙烯酰胺凝胶电泳法对 20 种贝母药材样品的蛋白质进行了对比分析研究。结果表明各种贝母的蛋白质电泳图谱存在明显差异, 同种植物栽培品与野生品之间存在差异。结果可作为鉴别贝母类药材的依据之一。