

Title	In vitro percutaneous absorption of thiamine disulfide from a mixture of propylene glycol and fatty acid
Sub Title	
Author	小股, 泰子(Komata, Yasuko) 稲岡, 美穂(Inaoka, Miho) 金子, 明子(Kaneko, Akiko) 藤江, 忠雄(Fujie, Tadao)
Publisher	共立薬科大学
Publication year	1992
Jtitle	共立薬科大学研究年報 (The annual report of the Kyoritsu College of Pharmacy). No.37 (1992. ) ,p.78- 78
JaLC DOI	
Abstract	
Notes	抄録
Genre	Technical Report
URL	<a href="https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000037-0078">https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AN00062898-00000037-0078</a>

慶應義塾大学学術情報リポジトリ(KOARA)に掲載されているコンテンツの著作権は、それぞれの著作者、学会または出版社/発行者に帰属し、その権利は著作権法によって保護されています。引用にあたっては、著作権法を遵守してご利用ください。

The copyrights of content available on the KeiO Associated Repository of Academic resources (KOARA) belong to the respective authors, academic societies, or publishers/issuers, and these rights are protected by the Japanese Copyright Act. When quoting the content, please follow the Japanese copyright act.

**In Vitro Percutaneous Absorption of  
Thiamine Disulfide from a Mixture  
of Propylene Glycol and  
Fatty Acid\***

Yasuko KOMATA, Miho INAOKA, Akiko KANEKO, and Tadao FUJIE

小股泰子, 稲岡美穂, 金子明子, 藤江忠雄

The in vitro percutaneous transport of thiamine disulfide (TDS), an oxidized dimer of thiamine, from propylene glycol through excised abdominal rat skin was studied. The application of saturated long-chain fatty acids (stearic acid (18 : 0), myristic acid (14 : 0), and lauric acid (12 : 0)) as enhancers to system was also studied. TDS permeated through rat skin from propylene glycol with a flux of  $2.5 \pm 0.8 \mu\text{g}/\text{cm}^2/\text{min}$ . The flux was enhanced 31 times by 12 : 0 and 1.4 times by 14 : 0, and was suppressed to 80% by 18 : 0. The absorption of TDS could not be explained by TDS permeation across a dialysis membrane, but the interaction between TDS and fatty acids may influence the system. The results show the possibility of developing a transdermal thiamine delivery system.

---

\* 本報告は *J. Pharm. Sci.*, 81 (7), 744—746 (1992) に発表.