

〈原 著〉

アニオン性およびカチオン性界面活性剤による メチルパラベンのモルモットの皮膚透過への影響

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Effect of Anionic and Cationic Surfactants on Guinea-pig Skin Permeation of Methylparaben

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Abstract

The effect of 5 cationic and 6 anionic surfactants on excised guinea-pig skin by using of methylparaben (MP) as a permeated product was studied in Franz diffusion cell. After the treatment of 10 mM surfactant solution, the MP concentrations permeated were analyzed by HPLC. There were the linear relationships between MP flux and 1.7–34.7 mM sodium dodecyl sulfate (SDS) or 2.5–10 mM benzalkonium chloride (BK) concentrations and the barriers's function of stratum corneum suffered straight from the increase of concentrations of SDS and BK. SDS, sodium lauroyl glutamate, sodium dodecansulfonate, sodium tetradecyl sulfate and BK especially enhanced the MP flux. The effect of surfactants on skin depended on their carbon numbers which were 12 and 14 in the case of anionic surfactant and 14 in the case of cationic surfactant.

Key words: surfactant, excised skin, methylparaben, permeation, HPLC