

CHAPTER IV

CONCLUSION

In this work, we have studied percutaneous penetration of UV filters through baby mice skins (*Mus musculus* Linn.) and volunteer human skins by Franz diffusion cell and Suction Blister techniques. The results indicated very good correlation between the penetration through baby mouse skin (epidermis+dermis) and human epidermis. The study, therefore, implies a possibility to evaluate transepidermal penetration of sunscreen chemicals using the whole baby mouse skin. Among 4 commercial UV filters which include octyl methoxycinnamate, butyl methoxy dibenzoylmethane, 4-methyl benzylidene camphor and Eusolex UV pearl OMC, only octyl methoxycinnamate and butyl methoxy dibenzoylmethane gave significant transdermal penetration. The two newly developed UVA filters, di(2-ethylhexyl)-2,4,5-trimethoxybenzalmalonate and 2-ethylhexyl-2,4,5-trimethoxycinnamate did not penetrate both the baby mouse skin and human epidermis. In addition, all polymeric UV filters did not penetrate both skins. The results indicated very good correlation between Franz diffusion cell experiment and the suction blister experiment.