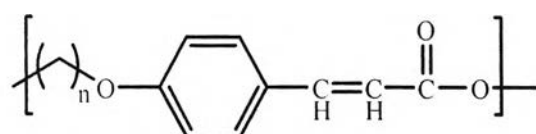


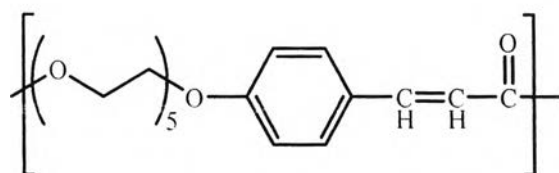
CHAPTER IV

CONCLUSION

UV Screening polymer, poly(*p*-alkoxy cinnamate) and poly(pentaethylene glycol cinnamate) or PPGC, were synthesized. All synthesized polymers showed similar UVB absorption band. Among five synthesized polymers, a yellowish liquid PPGC showed excellent solubility in cosmetic grade silicone fluids and various organic solvents, making application in formulation possible. The percutaneous absorption test were studied and all synthesized UV filtering polymers could not penetrate baby mice skin.



Poly(*p*-alkoxy cinnamate)



Poly(pentaethylene glycol cinnamate)

Figure 4.1 Structure of poly(*p*-alkoxy cinnamate) and poly(pentaethylene glycol cinnamate)

Suggestion for future work:

Because the obtained poly(*p*-alkoxy cinnamate) polymers were in the form of solid and the obtained poly(pentaethylene glycol cinnamate) was liquid so strategies for cosmetic applications should be studied separately. Moreover, irritation test must be done prior to further other investigations.