CHAPTER IV
CONCLUSIONS

The present work accomplished the design of polybenzoxazine inclusion compound via molecular imprinting polymer (MIP) concept. The molecular designs were done by two approaches, which are (i) mixing curing process, and (ii) structure specific design. In the case of (i), bisphenol A-based benzoxazine monomer was cured with cholic acid under optimal curing condition (190°C for 8 h *in vacuo*). The speculated structure was the network of polybenzoxazines having hydrogen bonding between hydroxyl group of polybenzoxazines and carboxylic group of cholic acid. The MIP of polybenzoxazines was demonstrated from the evidence that after removing cholic acid the polymer was selectively bound to carboxylic acid and other compounds to which the hydrogen bond was possible. In the case of (ii), polybenzoxazine was modified by co-curing of esterified bisphenol A and bisphenol A-based benzoxazine monomer. The polymer obtained was hydrolyzed to exclude ester group from the network. The MIP was identified from the rebinding with template-like species in the order of benzoic acid, cholic acid, deoxycholic acid, chloramphenicol, carbaryl, and pyridine.