CHAPTER V

CONCLUSIONS

Effects of β-CD and 2HP-β-CD on stability of ranitidine HCl were investigated and can be summarized as follows:

1. There was no evidence to conclude whether the solid ranitidine HCl : CD (β-CD, 2HP-β-CD) inclusion complexes prepared by co-grinding and kneading methods were formed. However, the NMR technique supported the formation of freeze-dried ranitidine HCl : CD (β-CD, 2HP-β-CD) inclusion complexes in solution.

2. The freeze-drying method was suitable for preparing the inclusion complexes of ranitidine HCl and CD (β-CD, 2HP-β-CD).

3. The molar ratio of 1:1 was appropriated for preparing the inclusion complexes of ranitidine HCl and CD (β-CD, 2HP-β-CD).

4. Both CDs did not influence the degradation kinetics, i.e., the order of reactions.

5. In general, both CDs could protect the hydrolytic degradation of ranitidine HCl by means of forming the inclusion complexes, except for the extremely acid pH value; 2HP-β-CD could stabilize the drug more than β-CD could.

6. Inclusion complexes of ranitidine HCl with CDs in a solid state retarded the degradation rate of drug, except for the inclusion complex with β-CD around the CRH.

7. 2HP-β-CD could protect the degradation of ranitidine HCl powder as a result of moisture sorption more than β-CD could.