CHAPTER V

SUMMARY

From the experimental data obtained showed that cimetidine could be determined by high pressure liquid chromatography. The sample preparation and chromatographic procedure were simple. Cimetidine was analyzed by using adsorption mode, silica gel as packing material, chloroform:methanol, ratio 70:30 as mobile phase with flow rate 3 ml/min and UV-detector at wavelength 240 nm. The linear peak height concentration range was 1.5-9.0 µg per 5 µl solution with coefficients of variation of 0.00-0.89 % and correlation coefficients of 0.9991. Cimetidine hydrochloride was analyzed by using the same conditions, excepted that chloroform:methanol, ratio 75:25:0.5 was used as mobile phase.

The HPLC method was applied to determine cimetidine in commercially available pharmaceutical preparation. The results obtained were compared to those obtained from the titration method and spectrophotometric method. The HPLC method showed high accuracy and good reproducibility as that of the titration method and the spectrophotometric method. However, the titration method has disadvantage for injection preparation in which water and other vehicles interfere the titration curve and end point could not be determined accurately.

It was observed that other common excipients and vehicles used in pharmaceutical preparations did not interfere in the estimation of cimetidine by HPLC method. Although the method required a special technique and availability of certain equipments, the sample preparation and chromatographic procedure were simple, the method was sensitive and accurate. This method was suited for routine analysis of pharmaceutical preparations of cimetidine, and could be applied for quantitative determination of another compounds in the research point of view.