CHAPTER V

CONCLUSION

In general, G, V and E plot would give accurate results for the titration in low composition of organic solvents, 30-40% v/v organic solvent/water.

There were limit of using G, V and E plot in different manner in accordance to the solvent systems and the kind of acid salt drugs which involved in the titration. V plot seems to be the best one that could be accurately used in determination of purity. Both G and V plots yielded accurate results for the titration in all three solvent systems. However, V plot has the advantage in term of simplicity.

For the plot of titration data after equivalence point, excellent result could be obtained for the titration in methanol-water systems. However, titration data after equivalence point should not be used in high pH region which could be affected by alkaline error of glass electrode as occurred in ethanol/water system.

Comparing the three mixed solvent systems: methanol-water, ethanol-water and propylene glycol-water, methanol-water seem to be the best solvent system for the titration by using G, V and E plots in

determination of equivalence points.

For the titration of diprotic acid salt drugs, such as chlorpheniramine maleate, E plot seems to yield more promising results than G and V plots.

The accuracy and reproducibility of Gran's method depended largely on pH measurement. Poor results would be obtained eventhough Gran's plots showed the appropriate linear lines if the pH values were errorneously measured by the potentiometer.