

CHAPTER V

CONCLUSION

For titration data prior to equivalence point, G plot (corrected for autoprotolysis of solvent) showed higher degree in accuracy and reproducibility for end point determination than V plot (uncorrected for autoprotolysis). End point determination by Gran's method for acid-base titration which had precipitation of unionized conjugate base, G plot and V plot would result in erroneous end point volumes when precipitation occurred and then precipitate could redissolve during the course of titration.

For the plot of titration data after equivalence point, excellent results would be obtained whether there was precipitation during the titration process or not. However, titration data should not be in the high pH region which would be affected by alkaline error of glass electrode.

The accuracy and reproducibility of Gran's method was also due to pH measurement. Poor results would be obtained even though Gran plots showed the appropriate linear lines if the pH values which were selected for calculation were erroneous.

By using mixed solvent of 40%v/v ethanol/water, end point determination by Gran plots (V plot and the plot of titration data after equivalence point) yielded satisfactory results. However, the limitation of using the data in high pH region should still be considered especially for the plot employing titration data after equivalence point.



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