

## CHAPTER V

### CONCLUSIONS AND RECOMMENDATIONS

In this work, foaming properties of nonionic/anionic surfactant mixtures with and without electrolyte at below and above cloud point have been studied. A drastic increase of the cloud point in the presence of anionic surfactant was observed. The addition of electrolyte depressed the cloud point, but the degree of cloud point depression was found to diminish with increased mole ratio of SDS, and with increased number of ethylene oxide groups in nonionic surfactant.

Foamability and foam stability of nonionic/anionic mixtures with and without NaCl were not significantly affected below the cloud point. On the other hand, foamability and foam stability drastically decreased in all cases above the cloud point. The same results were obtained in the mixed solutions in the presence of electrolyte. The loss in foamability and foam stability of mixed surfactant solution is due to the antifoam action of the mixed micellar-rich phase. Increasing mole ratio of SDS in a system tended to increase the foamability but decreased sharply above the cloud point temperature.