CHAPTER VII

CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

The conclusions can be drawn for this research as following:

1. Measurement of densities for the ternary system of benzene, cyclohexane and n-heptane and their three binary systems were done measured at temperature of 308.15, 313.15, 323.15 and 333.15 K and pressure of 1.01325, 2, 5 and 10 bar.

2. The experimental density data of the binary systems were used for calculating molar volume, partial molar volume, excess molar volume, as well as performing correlations by equations of state.

3. For the ternary system, prediction of molar volume with MRK is better than PR, PRSV2 and PRSV equations of state, at all temperatures and pressures.

4. All mixtures exhibited nonideality.

7.2 Recommendations for Future Studies

1. Additional mixing rules for equations of state should be tested.

2. Future work to obtain vapor density should be carried out. The fact that vapor phase properties are more sensitive to temperature and pressure, vapor density data should serve us better in evaluating the interaction parameters of equations of state.