

CHAPTER 6



CONCLUSION

The kinetic model of the resole type phenolic resin formation was developed for the prediction of behavior of these reactions. This study was limited to the phenol and formaldehyde reaction under NaOH-catalyzed condition in isothermal batch reactor. The Proposed model with linear relationship between rate constant and initial water concentration was the best predicting when compared to the literature data under the range of 30 to 90 °C and initial phenol concentration in the range of 0.5 to 5.375 mole/l.

For further study, the proposed model should be developed to calculate physical properties of the resole resin and compare with the experimental works which conducted to measure the physical properties and the modeling for other types of base can be developed by this model.