



## **CHAPTER V**

### **CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Conclusions**

Increasing pH, temperature, pre-soaking time, shaking time, surfactant concentration, and adding abrasives improve deinking. Complete deinking is attainable under reasonable process conditions and this work shows some variable effects useful in process optimization.

#### **5.2 Recommendations**

Additional studies, which may give further insight into the deinking process, are the determination of the zeta potential of ink particles and the wettability of the plastic and inked portion of plastic for different solutions (various pH and surfactant concentrations). In addition, other types of surfactant, especially anionic surfactants, should be investigated since this type of surfactant is more biodegradable and cheaper than cationic surfactants.