

## CHAPTER VI

### CONCLUSIONS AND RECOMMENDATION

#### 6.1 Conclusions

The conclusions of this research are as follows:

1. Airlift reactor can be used for photocatalytic degradation of organic dyes.
2. When aeration rate is increased, the performance of the reactor is better.
3. Among the three types of photoreactors, namely, airlift reactor, bubble column reactor, and stirred tank reactor, an airlift reactor had the best performance in photocatalytic degradation of organic dyes due to good mixing and good circulation in the reactor.

#### 6.2 Recommendation for future studies

The following recommendations for future studies are proposed.

1. Further study on operating on airlift reactor in a continuous mode for the photocatalytic degradation of organic dyes.
2. Study the effect of O<sub>2</sub> on the photocatalytic degradation of organic dyes by injecting pure O<sub>2</sub> gas instead of air.