

# CHAPTER V

## CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusions

The following conclusions are drawn from the study:

1. The low electric field can be used to separate oil from crude palm oil – in – water emulsion. The percentage of oil content in the bottom of vessel is less than that without electric field.
2. In batch system, the percentage of oil content in the bottom of vessel decreased when intensity of electric field and concentration increased.
3. In continuous system, the percentage of oil content in the bottom of vessel decreased when intensity of electric field increased and flow rate of emulsion was flow increased.
4. In both systems, the demulsification of palm oil – in – water emulsion increased with time.

### 5.2 Recommendations

Recommendation for future studies and research are as follow:

1. From the results of experiment, future studies should be scale up to pilot scale for study the demulsification by low electric field. The electrodes should be used many electrode and distance between them is close. The retention time of the process should be long time.
2. The available data might not be sufficient to be judged as reliable design of practical coalescence. Size of vessel, electrodes type, and fluid properties, some of these variables on coalescence performance should be examined to optimize the condition of practical operation.