CHAPTER V
CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

This work was to study some basic properties and detergency application of the MES. The experimental results indicated that the MES is excellent to form micelle and foam. Moreover, the MES can well be soluble in water that means it is easy to include in liquid formulation as compared with the LAS. So, the MES is suitable to be used for detergency application. From the detergency results, the MES, under microemulsion conditions, can provide higher oil removal efficiency than the LAS and commercial detergent. A mixed surfactant system with 5% MES and 5% AE5 was used as the selected formulation because it provided the lowest IFT. The selected formulation at a total surfactant concentration of 0.5% provides the highest efficiency in oil removal as compared among all studied surfactants. In addition, the amount of residual surfactant on the fabric of the selected formulation was found to be close to those of the commercial detergent and the LAS. Therefore, the MES is considered to be a good candidate for a use in laundry products. An increase in washing temperatue was found to improve the efficiency of oil removal due to the reduction of palm oil viscosity.

5.2 Recommendations

Due to the important of water hardness on foaming and detergency performance, the effect of water hardness should be studied. and The biodegradability of all surfactants should be investigated.