

CHAPTER V

CONCLUSIONS

5.1 Conclusions

The conclusions of the present research are as followed:

1. Kinematic viscosity of alkyl esters increased when molecular weight increased. Kinematic viscosity of lauryl-myristyl esters is higher than octyl esters and hexyl esters, respectively. Kinematic viscosity of alkyl esters produced from cyclic alcohol is higher than alkyl esters produced from branched chain and straight chain alcohol, respectively. Kinematic viscosity of cyclohexyl esters is higher than 4-methyl-2-pentyl esters and hexyl esters, respectively.
2. Viscosity index of alkyl esters decreased when molecular weight increased. Viscosity index of hexyl esters is higher than octyl esters and lauryl-myristyl esters, respectively. Viscosity index of alkyl esters produced from straight chain alcohol is higher than alkyl esters produced from branched chain and cyclic alcohol, respectively. Viscosity index of hexyl esters is higher than 4-methyl-2-pentyl esters and cyclohexyl esters, respectively.
3. Properties of octyl esters are similar to lubricating base oil.