CHAPTER V
CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

1. Asphaltene deposition experiment which uses heptanes to destabilize asphaltene from crude oil should consider the required time for asphaltene to separate from crude oil before detecting oil. In our apparatus, the solution is forced to diffuse faster by a small entrance of mixing frit at the initial mixing then normal diffusion is occurred during the 2-inch line before flows into capillary.
2. The pre-filter can prevent formed asphaltene particles from mixing section into capillary in case of CH crude oils.
3. Asphaltene particles will adhere to the wall in the short period that it starts to separate from the oil.
4. Asphaltene deposition is occurred in the short distance.
5. Viscosity can be one of the main properties that cause the big changing in asphaltene deposition because diffusion will become slower due to increasing of viscosity. To confirm this, the further studies need to be done.

5.2 Recommendations

1. For further studies in asphaltene deposition, the relief valves will be applied into the apparatus to slowly relief the pressure in the system. The solution will be slowly removed from the system then we will able to collect the deposit from capillary.
2. In order to confirm deposition location, the experiment should be conducted in longer capillaries. Short capillaries will be connected by using union to make the longer capillary because we can understand what happen inside each capillary.
3. Using larger diameter capillary for collecting more mass and easy to determine the deposition pattern.
4. The effect of viscosity should investigate further more by using other crude oils that contain almost the same amount of asphaltene as CH or GM3.
5. The modelled oil, extracted asphaltene from studied crude oil solute in toluene, should be used for studying the effect of asphaltene content.
6. Shear effect can be studied more by adjusting flow rate.