

## CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusions

Taguchi method was used to examine behavior of electrospinning when producing Binahong polymer fibres. Three factor and three level has been chosen to obtain the smallest diameter. From the data obtained, it can be concluded the smallest fibre diameter was achieved at 0,379996  $\mu\text{m}$  where the variation of distance, voltage and PVA viscosity are at 8 cm, 30 kV, and 8%(98,6922 P) respectively. The biggest fibre diameter was achieved at 1,2031330  $\mu\text{m}$  where the variation of distance, voltage and PVA viscosity are 16 cm, 15 kV and 337,249 P respectively. Closer distance between spinneret tip and collector, produced smaller fibre diameter. Less viscous polymer produced smaller fibre diameter. From ANOVA, distance between tip and collector has contribution to fibre diameter which is 23,2595293% and viscosity has contribution to fibre diameter which is 74,0820631%.

### 5.2 Recommendations

For future recommendation, it needs to increase the level of variation for each factor in order to magnifying the observer. This will lead to produce higher quality data of research and possibility to produce fibre to nanometer ( $< 100 \text{ nm}$ ) level.

