CHAPTER 6: CONCLUSION

Identification and discrimination of *S.* Typhimurium serotype is important because it is the fourth most common serotype in Malaysia and also, *S.* Typhimurium is a common cause of nontyphoidal Salmonellosis in humans and animals.

In this study, restricted AP-PCR method was generated 19 AP profiles among 49 *S.* Typhimurium isolates and showed discriminative power of $D = 0.71$. However, this technique was robust and gave identical results when repeated.

Restricted AP-PCR analysis was of limited value for subtyping of *S.* Typhimurium isolates from humans and animal sources due to the low discriminatory power. The results revealed that resAP-PCR analysis of *Hae*III digested S. Typhimurium DNA using ResAP-PCR I, ResAP-PCR II and ResAP-PCR III primers demonstrated low polymorphism and low diversity among *S.* Typhimurium isolates.

It may suggest this restricted AP-PCR fingerprinting technique was not very useful for *Salmonella* Typhimurium typing, because it was not able to discriminate potentially different isolates.

In conclusion, the restricted AP-PCR method used in this study provided a simple, rapid, reproducible but moderate discriminative molecular tool for strain subtyping of *Salmonella enterica* Typhimurium isolates.