

## CHAPTER VII

## SUMMARY

Isolation of LAB from honey was possible using MRS agar with 0.8% CaCO<sub>3</sub>. The number of LAB isolated varies with source of honey, Al-Sedar honey contains higher numbers (10000) LAB than Malaysian honey (100) and Saudi (100). Six LAB isolates were evaluated against *S. aureus*, *S. epidermis*, *B. subtilis*, *Salmonella typhimurium*, *E. coli*, *E. aerogenes*, *S. marcescens*, *K. pneumoniae* and *S. sonnei*. All the isolates inhibited the growth of target pathogenic bacteria especially *S. typhimurium* and *S. aureus*. Both the cells and supernatant of LAB isolates produce antibacterial compounds that were inhibitory to target bacteria. The antibacterial activity of the supernatant of the LAB isolates were heat stable at 90 and 121 °C and active at pH 3 and 5 but lost the activity at pH 6 except against *E. aerogenes*. The antibacterial activity of supernatants H006-A from Libyan honey and H010-G from New Zealand honey may be attributed to protein-like compounds compared to other isolates. The isolates were identified using API 50CH as *Lactobacillus acidophilus* 1 however, they were considered uncultured bacteria using 16S rDNA. RAPD analysis using P66 showed that all six LAB isolates were different from each other and from *Lactobacillus acidophilus* isolated from milk.