CHAPTER VII

CONCLUSIONS

1. The developed Nested RT-PCR using Proteinase-K/SDS extraction procedure yielded a 100 fold higher sensitivity of HCV RNA detection than using GuSCN extraction procedure. The sensitivity of the Nested PCR using Proteinase-K/SDS extraction was about $3x10^2$ genome eq/ml, or 15 genome eq/assay, as assessed with the PELICHECK HCV RNA sensitivity panel. This sensitive and reliable technique was found useful for identification of HCV carriers in blood donors.

2. Anti-HCV seronegative donations neither with normal ALT level nor elevated ALT level had detected HCV RNA in their sera as tested by Nested RT-PCR. This suggested that routine ALT testing for further prevention of hepatitis C virus infection after exclusion of HCV seropositive blood may be unnecessary.

3. The HCV RNA positive rate in anti-HCV seropositive donations was 62.5%.The probability of being HCV RNA positive in anti-HCV seropositive donations was significantly higher among those with elevated ALT and/or high ELISA OD values than those with normal ALT and/or low ELISA OD values. The questions of whether anti-HCV positive / HCV RNA negative donations were due to low-grade viremia, loss of infectivity, failure of the PCR assay, or even false positive of ELISA assay could be answered only after those donors have been followed up for sometime.

4. In this study, it appeared that second generation anti-HCV screening of blood donations was effective in preventing transfusion-transmitted HCV infection.