

## CHAPTER IV

### Conclusion

Electrospray ionization is a soft ionization technique, so that it possible to maintain the condition of noncovalent interaction between PNA and DNA in the gas phase. The data obtained from ESI-MS is the energy used to break noncovalent bond between PNA and DNA. When using a lot of energy to break bonds between the PNA and DNA, the PNA-DNA complexes are very strong. It is therefore possible to determine the stability of PNA-DNA complexes by ESI-MS through dissociation energy ( $E_{CM}$ ) obtained from CID experiments. In this experiment, some discrepancies between the gas phase and the solution phase stability of PNA-DNA complexes were observed especially in G/C rich-sequences which could be explained by the dominant role of base stacking in solution phase, which disappeared in solution phase. We hope that this information will be useful to provide further understanding of the noncovalent interaction of PNA-DNA complexes.

