

CHAPTER V

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

From the study, orange jasmine leaves could absorb gaseous PAH on the roadsides. There are 10 individual PAH found in 4 sites, and ACE was dominant in leaves. Saphan Khwai has the highest of total PAH in leaves (82.46 mg/kg). The difference of total PAH concentrations were independent on traffic volume. Moreover traffic jams, type of engines, driving conditions, exposure and contact time of PAH could be effect on PAH concentration in leaves. The characteristic of orange jasmine leaves could support the absorption of atmospheric PAH along the roadsides because they had thick lipid layer and stand along the roadsides.

The orange jasmine leaves can be used as a bioindicator for monitoring atmospheric PAH. This is indicated by the regression equations of the calculated and measured atmospheric concentrations, and correlation coefficients. The 10 individual PAH were plotted, and found that ACY, ACE, FLU, PHE and ANT give a good relationship, then the regression equations of these compounds can be used to predict the atmospheric concentrations of PAH from leaf concentrations, due to gas phase plays an important role in the accumulation in plant leaves. Finally, the orange jasmine leaves can be used to estimate the atmospheric PAH, and give more advantage as easier to monitor, lower cost than conventional method and suitable for monitor many area at the same time.

5.2 Recommendation

Sampling sites should be more than four sites to obtain more data for suitable equation, in order to increase the efficiency of atmospheric PAH prediction.