

CHAPTER V

CONCLUSIONS AND SUGGESTIONS FOR FUTURE WORK

5.1 Conclusions

PAHs in exhaust emission from gasoline test engine consist of different levels of naphthalene, acenaphthylene, fluorene, phenanthrene, anthracene, fluoranthene, and pyrene. The emission of PAHs is influenced by the engine speed and dosage of dispersant additive in gasoline fuel.

The optimum engine speed at which the emission of PAHs is lowest is 1,500 rpm. Higher amounts of PAHs was recovered when the engine speed increases.

The dispersant additive blended in gasoline also impinges on the emission of PAHs from the gasoline test engine. The effective quantity of dispersant for decreasing PAHs in exhaust emission is 400 ppm (v/v). PAHs in exhaust emission increased if more dispersant was employed.

5.2 Suggestions for Future Work

1. Various packages of dispersant should be comparatively employed for the investigation of PAHs in exhaust emission.
2. The gasoline blended with dispersant should be tested with a chassis dynamometer for studying real driving condition and the effect of engine load.
3. The exhaust emission from the gasoline engine, powered by gasoline and gasoline blended with the dispersant, with and without the catalytic converter should be comparatively tested for PAHs.