

# Conclusion and Recommendations

## 5.1 Conclusion

This research work has been extended to propose a strategic framework to be used as roadmap for different stakeholders for better medical waste management and treatment.

This study focused on the liquid bio-oil which produced from the slow pyrolysis of the medical waste. Also it focused on the calorific value of the liquid and the syngas composition.

The slow pyrolysis of the infectious medical waste results was liquid bio-oil and syngas. The liquid bio-oil produced from this slow pyrolysis has the many advantages of being storable and transportable, as well as having the potential to supply a number of valuable chemicals.

## 5.2 Recommendations

Further achievements can be made if the following points are to be considered for further research work

- Since the research project was focused on the capital city, same research tasks can be extended to other cities, so that a complete picture for Sudan is formed in order to draw more comparisons and support of the current findings.
- Since the proposed framework was evaluated by medical staff only, further evaluation need to be conducted on the effectiveness of the framework in real life and, if required, further alignment and tuning is carried out.
- It is recommended pelletizing in order to ensure complete pyrolysis process consequently the amount of syngas will be increased.
- The experiment should be achieved in less air as much as possible.

- The cooling system should be modified to enhance the heat transfer process.
- To get out diesel and gasoline it must crack the bio oil by hydro treatment and carbonization.