

## CHAPTER V

### CONCLUSION

The organic compounds e.g., glycerol, free fatty acid and some mono-, di- or triglyceride are completely removed when solid waste is exposed to temperature around 700 °C as observed by the white color of the treated sample. For extraction and precipitation method, methanol provides the highest amount of precipitated salt and recycled ethanol provide the least precipitated salt at the same ratio. Methanol can provide the maximum amount of precipitated salt at ratio 5:4, ethanol provides the best condition at ratio 5:5 and 5:7 for recycled ethanol. From XRD analysis, the samples from both treatment techniques are potassium sulfate. Furthermore, AAS analysis indicates that the obtained 99.04 % purity. From economic evaluation, at minimum condition, the product price of combustion process (5.55 bath/kg-K<sub>2</sub>SO<sub>4</sub>) is cheaper than extraction and precipitation process (6.16 bath/kg-K<sub>2</sub>SO<sub>4</sub>). Also the payback period of combustion process is shorter than extraction and precipitation at the same product's sale price.