

## **Characterization and application of molten slag as catalyst in pyrolysis of waste cooking oil**

### **ABSTRACT**

Chemical and physical analysis was performed to identify the molten slag composition and its ability to be used as alternative catalyst in pyrolysis of waste cooking oil. The implementation such type of catalytic material could be useful in reducing the process cost. To increase the efficiency (increase the active site) of molten slag, it was modified by acid washing that resulted in an increase in the acidity from 159 to 1224  $\mu\text{mol/g}$ . The results showed that the yield of bio-fuel was increased and the product selective to n-C15 upon the modification of molten slag by acid treatment.

**Keyword:** Molten slag; Thermal activation; Chemical activation; Pyrolysis; Bio-fuel