

## **Extraction and characterization of cocoa pod husk oil as biofuel feedstock**

### **ABSTRACT**

In this study, the cocoa pod husk oil was extracted and characterized for biofuel feedstock application. The cocoa pod husk oil was extracted by using Soxhlet extraction method (~ 4 h) with using ratio of 1:5 for dried cocoa pod sample and hexane assolvent and the percentage yield is 0.52 w/w %. The chemical and physical properties of the extracted oil were characterized which included pH, density, saponification value, acid value and free fatty acid percentage; and the results obtained from analysis are 6.25, 0.86 g/cm<sup>3</sup>, 134.64 mgKOH/g oil, 11.50 mgKOH/g oil and 5.78, respectively. The functional group of chemical compounds in the oil were analysed by using FTIR. Finally, the volatile chemical compounds in the extracted oil of cocoa pod husk were analyzed by using GC-MS.