

## Extreme pressure properties investigation of palm olein using four ball tribotester

### Abstract

This experiment conducted using Four Ball Tribotester as a tool to obtained data for extreme pressure properties of Refined, Bleached, and Deodorized (RBD) Palm Olein. In this paper, test method ASTM D2783 - 03 (Reapproved 2009) been adapted to monitor the pressure effect in wear and frictional torque of RBD Palm Olein. This test method provides reliable information because it resemble to the eventual mechanisms for lubricating stress of the fluids under pressure similar in gear transmission operation. Wherein, pressure applied between surface to surface contacts and sliding between surface in gear and wet clutch mechanism. From this research, the results provide an understanding of RBD Palm Olein performance against extreme pressure condition. It was found that RBD Palm Olein oil has good mild extreme pressure properties, but film breakdown occurs at higher pressure load. The frictional torque results also indicated with pressure increment, the friction force occurs between moving bodies also increase.