

## Study on light absorption of crude palm oils by using different light sources

*Monday 21 May 2018 18:30 (15 minutes)*

Modern analysis of organic materials by using light absorptions are very popular both in industries and research laboratories. Typically, UV-VIS spectrophotometer are used. UV-VIS consist of broad spectrum gas light source and UV source, monochromator and light detectors. The UV-VIS is very complicated and expensive. In this research we would like to develop simple and cheap spectrophotometer for specific absorption of wavelengths. The LEDs which emitting Gaussian shape spectrum are used as light sources and light detectors. Absorptions of wavelengths 269 and 446 nm by crude palm oils were studied. The results for UV-VIS and LED spectrophotometers will be compared. Since the Full Width at Half Maximum (FWHM) of the two light sources are different, the dependence of absorption on temperature and palm oil density will be discussed.

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**Session Classification:** A03: Optics and Photonics (Poster)

**Track Classification:** Optics, Non-linear optics, Laser Physics, Ultrafast Phenomena