

## **Changes in oxidation indices and minor components of low free fatty acid and freshly extracted crude palm oils under two different storage conditions**

### **ABSTRACT**

This article reports on the changes of oxidation indices and minor components of low free fatty acid (FFA) and freshly extracted crude palm oils after storage at ambient ( $28 \pm 1$  C) and 60 C for 77 days. The changes in peroxide value (PV), FFA, extinction coefficient at 233 and 269 nm (K 233 and K 269), bleachability index (DOBI), carotene and vitamin E contents were monitored. PV, FFA, K 233 and K 269 of both oil samples increased as storage progressed while the values of carotene and vitamin E contents decreased. At the end of storage period at 60 °C, the carotene content of low FFA crude palm oil was 4.24 ppm. The storage conditions used led to the loss of entire vitamin E fractions of both oil samples as well as a reduction in DOBI values except for freshly extracted crude palm oil stored at ambient temperature.

**Keyword:** Low free fatty acid; Freshly extracted; Crude palm oil; Storage; Oxidation indices; Vitamin E