

EFFECTS OF OLIVE OIL ADDITION TO
CORN OIL DOMESTIC FRYING ON
THE LIPID OXIDATION

CHONG CHUAN YONG

2007

B.SC (HONS) FOOD SCIENCE & NUTRITION
SCHOOL OF APPLIED SCIENCES
UNIVERSITY COLLEGE SEDAYA INTERNATIONAL

ABSTRACT

The purpose of this study was to evaluate oxidative stability of corn oil added with extra-virgin olive oil (EVOO). Four combinations corn oil with different levels of extra-virgin olive oil were prepared, (ratio of extra-virgin olive oil to corn oil; 0:100 (Control), 10:90 (Sample A), 30:70 (Sample B) and 50:50 (Sample C) by volume). French fries were fried at 180°C for 7 min in the corn oil-added EVOO. The fried oils were stored in a dark place at 25°C for 15 days. Analyses were carried out every 5 days. Lipid oxidation of the oils was determined by Peroxide Value (PV), Iodine Value (IV), and Fourier Transform Infrared Spectroscopy (FTIR). Results showed that there was a significant increase ($P < 0.05$) in the PV and a significant decreased ($P < 0.05$) in IV in all the levels of combination upon storage. However, the decrement in IV of the 50:50 combination was not as drastic compared to the other combinations. The FTIR spectra shows changes in the region of particular functional groups, proved that 50:50 combination give the best protection toward oxidative stability in domestic frying.

UCSI
LIBRARY