

## **Fatty acid ratios and their relative amounts as indicators of oil stability and extent of oil deterioration during frying.**

### **ABSTRACT**

Palm olein (PO), canola (CLO), soybean (SBO) and Moringa oleifera seed oils (MoO) were used to fry potato chips for 6 h a day for 5 days and extent of deterioration determined. FA ratios C 18:1/ C 18:2 + C 18:3 and amounts of C 18:1 + C 16:0 were compared to changes in total polar compounds. TPC in MoO (20.78%) and PO (21.23%) were significantly lower than those in CLO (28.73%) and SBO (31.82%). There was a decrease in the amounts of C 18:2 from day 0 to 5 in PO (10.80 to 8.37%), CLO (22.76 to 19.92%) and SBO (53.00 to 51.57%) and a decrease in C 18:3 in CLO (6.77 to 4.55%), respectively, and an increase in C 16:0; MoO (6.10 to 9.60%) and PO (37.70 to 41.99) and a decrease in C 18:1; (74.40 to 73.03%) in MoO, respectively. There was a negative correlation ( $r = - 0.9919$ ) between C 18:1/ C 18:2 + C 18:3 and TPC produced in PO, CLO and SBO.

**Keyword:** Fatty acid ratios; Oil stability and deterioration; Deep fat frying.