

# **Antioxidative Effects of Bene Kernel Oil and its Unsaponifiable Matter Fraction on Canola Oil Blended with Palm Olein and Virgin Olive Oils during Deep Frying**

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Frying performance of canola oil (CAO), the blending of CAO with palmolein and virgin olive oils (CAO/POO/VOO, 75:15:10) with (0.05 and 0.1%) and without added bene kernel oil (BKO), tert-butylhydroquinone (TBHQ, 100 ppm) and the unsaponifiable matter fraction of bene kernel (UFB, 100 ppm) was investigated during frying of potatoes at 180 °C.

Frying stability of the oil samples during the frying process was measured based on the variations of conjugated diene value (CDV), carbonyl value (CV), total polar compounds (TPC) content, thermo-oxidative (oxTGM, TGD, andTGP) and hydrolytic (FFA and DG) components and total tocopherols (TT). Frying stability of the CAO significantly ( $P < 0.05$ ) improved in the presence of the POO and VOO and the antioxidative additives. The best frying performance was obtained by using of the BKO (0.1%), UFB, and TBHQ.

**Keywords** Canola oil, Frying stability, Bene kernel oil, Palm olein oil, Virgin olive oil, TBHQ, Unsaponifiable matters