

## Effect of varietal differences on composition and thermal characteristics of avocado oil.

### ABSTRACT

A study was carried out to compare the characteristics of oils from three Malaysian avocado (*Persea americana*) cultivars with those of the oil from the Australian Hass avocado variety. Oil samples extracted from matured-avocado fruits were assessed for basic physico-chemical parameters, fatty acid and triacylglycerol (TAG) compositions, and melting and solidification characteristics. In comparison to Hass variety, the oil contents of the local avocado cultivars were significantly lower and found to be mostly in semisolid form. As a common feature, oils of both local cultivars and Hass variety are found to have oleic acid as the most dominant fatty acid. However, there are differences between them with regard to the proportional distributions of palmitic and linoleic acids. While the major TAG of local avocado cultivars were POO, followed by POL, OOO and PPO, the dominant TAG of Hass variety were OOO, followed by PPO, OOL and POL. Due to these differences in fatty acid and TAG distributional patterns, the oils of local avocado cultivars are found to possess iodine value, slip melting point, melting and solidification characteristics, which are completely different from those of the imported Hass avocado variety.

**Keyword:** Avocado oil; DSC; Hass avocado; Lard alternatives; Thermal behavior; Vegetable oils.