

## Effect of fractional crystallization on composition and thermal characteristics of avocado (*Persea americana*) butter

### ABSTRACT

Fractionation of plant butters like avocado (*Persea americana*) may yield useful fat derivatives with distinct physical and functional properties. In this study, avocado butter was sequentially crystallized in acetone at 5 °C (2 h), 0 °C (24 h), and 20 °C (24 h) until the mother-liquor becomes devoid of any crystal formation. The high-melting stearin isolated at 5 °C and low-melting olein isolated at 20 °C were compared with the original sample in terms of fatty acid and triacylglycerol (TAG) compositions and thermal profiles. With respect to the original sample, low-melting olein is possessed with higher proportions of diunsaturated and triunsaturated TAG while high-melting stearin is found to become enriched with disaturated and trisaturated TAG molecules. These differences in compositions make the basic physico-chemical parameters as well as the thermal profiles of high-melting stearin and low-melting olein to be distinctly different from those of the original sample.

**Keyword:** Avocado butter; Fractional crystallization; Differential scanning calorimetry (DSC)