

Fatty acid composition of seed oils extracted from six underutilized fruits grown in Sri Lanka

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Although there has been an influx of literature on nutritional value of underutilized fruit crops, the studies on the properties of seed oils of those fruits is scanty. In this backdrop, the objective of the present study was to determine the fatty acid profile of oils obtained from six underutilized fruits found in Sri Lanka: *Annona muricata* [Annonaceae, Soursop (**S**)], *Annona squamosa* [Annonaceae, Sugar Apple (**SA**)], *Annona reticulata* [Annonaceae, Custard Apple (**C**)], *Flacourtia indica* [Salicaceae, Uguressa (**U**)], *Pouteria campechiana* [Sapotaceae, Kaha Lulu (**L**)] and *Durio zibethinus* [Malvaceae, Durian (**D**)]. Seeds of all the fruits were air-dried and powdered. Oil was extracted into hexane separately and the mixtures were desolventized in vacuo. The fatty acid methyl esters were analyzed using gas liquid chromatography (GLC) and the quantity of each fatty acid was determined. All the seed oils contained palmitic (**SA**: 12.91%; **S**: 19.07%; **C**:17.30%; **U**: 19.75%; **D**: 6.75%; **L**: 8.80%), stearic (**SA**: 31.85%; **S**: 44.21%; **C**: 41.21%; **U**: 8.17%; **D**: 11.57%; **L**: 55.36%) and oleic acids (**SA**: 23.27%; **S**: 33.27%; **C**: 40.30%; **U**: 30.82%; **D**: 12.11%; **L**: 23.24%) with high concentrations and linoleic acid with comparatively low concentration. Lulu seed oil contained low amount of caprylic, capric, lauric and myristic acid. Uguressa (24.22%) and Durian (7.50%) seed oils contained essential fatty acid -linolenic, thus can be used as a potential nutrient source. The dominant fatty acids, however, are palmitic, oleic and stearic acids. The findings of the present study can be utilized to increase the demand of underutilized fruit crops.

Keywords: *Fatty acid composition, GC, Flacourtia indica, Durio zibethinus, Annona spp*

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