

**[PS2.63]****Selective Extraction of Fatty Acids and Unsaponifiable Matter of *Caryocar brasiliense* Camb and *Acrocomia aculeata* Pulp.**R.G.B. Mariano<sup>1</sup>, S. Couri<sup>2</sup>, R.I. Nogueira<sup>2</sup>, S.P. Freitas\*<sup>1</sup><sup>1</sup>Universidade Federal do Rio de Janeiro-EQ, Brazil, <sup>2</sup>Embrapa Food Technology, Brazil

*Caryocar brasiliense* Camb. (pequi) and *Acrocomia aculeata* (macaúba) are tropical fruits widely distributed in the Brazilian cerrado. In dry basis, the pequi and macaúba pulps are mainly constituted of lipids (45 to 50%) and (35 to 40), respectively. Its' fruits oils are, usually, applied in the cosmetics and food local industry. In this study, the pequi and macaúba raw-fruits were collected in the Minas Gerais, Brazil. The fruits were autoclaved at 121°C for endogenous lipase inactivation and stored under refrigeration for subsequent processing. The pequi and macaúba pulps were submitted to drying under convective air at 55 °C until constant weight, reaching final moisture content about 10 %. The pulp processing was performed to produce two fractions oils: cold-pressed oil and ethanol-based oil. The cold-pressed oil was obtained from dried pulp in a continuum press (expeller) at room temperature (22 ± 1 °C) and then filtered under vacuum. The pressed-cake was submitted to solid-liquid extraction using ethanol (99 °GL) as solvent at 60°C and solvent/substrate ratio of 2:1. Then, the ethanol-based oil was recovered by decantation at 5 °C. The fatty acids composition was evaluated by high-resolution gas chromatography using high purity methyl esters as external standard. The unsaponifiable matter was carried out by a modified method (Hartman, Viana & Freitas, 1994). The cold-pressed pequi oil presented higher (33 %) saturated fatty acids and smaller unsaponifiable matter (about 32%) contents, compared to ethanol-based cake oil. Regarding the cold-pressed macaúba oil no difference was observed, according Fisher test (p<0.05), in the total saturated and unsaturated fatty acids. Unlike other vegetable oils, the unsaponifiable matter in the cold-pressed macaúba oil was found 3.8 times greater than in ethanol-based cake oil.

Hartman, L.; Viana, H.S.; Freitas, S.P. Modified method for the determination of unsaponifiable matter in oils and fats. *Analyst*, v.119, p.1793,1994.

Keywords: *Caryocar brasiliense* Camb, *Acrocomia aculeata*, Fatty acids, Unsaponifiable matter