



6TH BCNP
Brazilian Conference
On Natural Products
XXXII RESEM



Federal University of Espírito Santo
Vitória – ES/Brazil
November 05–08/2017

Sapucaia (*Lecythis pisonis* Camb.) a rich nutritional source and characterization of arils a new consumption approach

Elisangela Flavia Pimentel¹, Renata Badke de Menezes Primo¹; Ana Claudia Hertel Pereira¹; Tainã Z. Vieira¹; Dominik Lenz¹; Tadeu U de Andrade¹; Fabiana Gomes Ruas²; José Aires Ventura²; June Ferreira Maia¹, Denise C. Endringer.¹

¹Pharmacy Postgraduate Program, Vila Velha University, Av. Comissário José Dantas de Melo, n°21, 29102-920 – Boa Vista, Vila Velha, ES, Brazil – Tel.: +55 27 3241-2198.
endrings@gmail.com; denise.endringer@uvv.br

Introduction: *Lecythis pisonis* Cambess, also known as Sapucaia, is neotropical native tree from the Amazonian and Atlantic Forest which has been notice for its use as a natural source of nutrients. This study aims to determine the chemical characteristics of the nuts, arils and seed oil of *L. pisonis* native from Espírito Santo, Brazil. **Materials and methods:** The centesimal composition assays and determination of nutritional values were performed using standard methods. The LD50 of the oil was evaluated according to the OECD 423 protocol. Determination of metals Fe, Na and Pb were performed by FAAS. **Results and Discussion:** Lipids (60.14%) and protein (23.33%) were the major nut components. The high ash content suggested significant amounts of minerals in the nuts. The arils had a carbohydrate content of 83.9% and a nutritional value of 363.3 kcal.100g⁻¹. The good quality of oil was suggested by low acidity (0.4 mg NaOH.g⁻¹), low iodine content (93.0 g I₂.100g⁻¹), peroxide index of 2.9 mEq.kg⁻¹, saponification index of 182.66mg KOH.g⁻¹ and a higher concentration of mono-unsaturated than poly-unsaturated fatty acids. The oil was also classified by GHS as Category 4 and by OECD as having low toxicity (LD50>5000 mg.kg⁻¹ in mice and 405 mg.kg⁻¹ in humans). Lead was not detected in any sample. Iron was detected in nuts (2.17±0.47 mg.100g⁻¹), aril (1.12±0.15 mg.100g⁻¹) and oil (9.40±0.005 µg.g⁻¹). As sodium at 3.27±0+62 mg.100g⁻¹ in nuts, 6.62±1.06 mg.100g⁻¹ in the aril and 0.7±0+22 µg.g⁻¹ in oil. **Conclusion:** Thus, consumption of oil, nuts and arils should be recommended as an excellent nutritional source.

Realization



Promoter



Sociedade Brasileira de Química