

10 Development and Characterization of Lipids Nanocapsules with *Attalea Phalerata* Pulp Oil

Fernando Freitas de Lima¹; Priscila Cordeiro Lima Fernandes²; Ludmilla David de Moura²; Ivan Pires de Oliveira³; Caroline Honaiser Lescano⁴; Eneida de Paula²; Leila Maria Spadoti¹

¹Center of Dairy Technology, Instituto de Tecnologia de Alimentos, Campinas – SP, Brazil; flfernando_@hotmail.com ²Institute of Biology, Universidade Estadual de Campinas, Campinas – SP, Brazil;

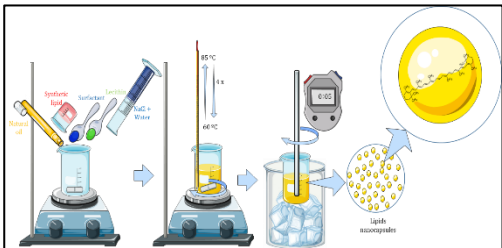
³Institute of Biomedical Sciences, Universidade de São Paulo, São Paulo – São Paulo, Brazil; ⁴Faculty of Medical Sciences, Universidade Estadual de Campinas, Campinas – SP, Brazil.

PURPOSE:

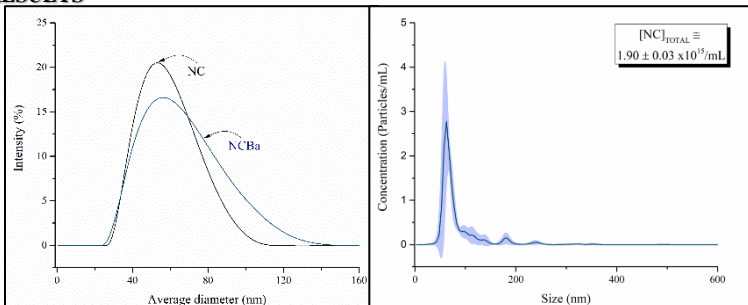
To develop and characterize (size, polydispersion, zeta potential and particle concentration) of *bacuri* (*A. phalerata*) pulp oil (BPO) in lipids nanocapsules (LNC_{BPO})

METHODS:

Briefly, liquid lipid, BPO, nonionic surfactant, hydrogenated soy lecithin was mixed at room temperature and NaCl in Milli-Q water. The mixture was subjected to five temperature cycles and an ice bath was given at the end.



RESULTS



- The results after development, showed LNCs with average sizes of 55.87 ± 0.41 nm, PDI of 0.118 ± 0.066 and zeta potential of -24.80 ± 1.42 and concentration of 1.9×10^{15} particles/mL

CONCLUSIONS:

- The results suggest a system with characteristic sizes for nanosystems.
- The low PDI (<0.150) and zeta potential distant from zero (negative) suggest stability for the system.
- Thus, LNC_{BPO} is viable for further characterization studies and later *in vitro* and *in vivo* biological evaluation.