EFFECT OF THE CONSUMPTION OF COOKIES ADDRESSED OF BURITI OIL (*Mauritia Flexuosa*) ON THE VITAMIN A STATUS, LIPID PROFILE, BLOOD GLUCOSE LEVELS AND MURINOMETRIC PARAMETERS OF YOUNG RATS

Jailane de Souza Aquino\(^a\), Débora Catarine Nepomuceno de Pontes Pessoa\(^b\), Juliana Késsia Barbosa Soares\(^c\), Robson de Jesus Mascarenhas\(^d\), Tânia Lúcia Montenegro Stamford\(^b\)

\(^a\) Department of Nutrition / CCS. Federal University of Paraíba. Campus I, s / n. Castelo Branco, 58051-900, João Pessoa - PB, Brazil.
\(^b\) Department of Nutrition / CCS. Federal University of Pernambuco. Campus of Recife, s / n, Cidade Universitaria, 50670-901, Recife - PE, Brazil.
\(^c\) Department of Nutrition / CES. Federal University of Campina Grande. Olho d'agua da Bica, s / n, 58175-000, Cuité-PB, Brazil.
\(^d\) Federal Institute for Education, Sertão Pernambucano Science and Technology Center - Campus of Petrolina. BR 407, km 08, Jd. São Paulo, 56314-520, Petrolina - Pernambuco.

Abstract

Cookies are widely consumed, providing a vehicle for fortification is one strategy to control vitamin A deficiency, a public health problem in many countries. The objective of this work was to evaluate the effect of the consumption of cookies added of buriti oil on food efficiency ratio (FER), food conversion ratio (FCR) and murinometric and biochemical parameters of young rats. Twenty animals were divided into two groups, being fed with diets added of cookies containing soybean oil or buriti oil for 28 days. The vitamin A contents in cookies and those ingested by animals were evaluated. FER, FCR, lipid profile, vitamin A status, blood glucose and murinometric parameters were quantified. The greatest weight gain and thoracic circumference were recorded in the control group; however, no statistical differences were observed for the other murinometric parameters such as diet intake, FCR, FER, blood glucose, and lipid profile. The intake of diet supplemented with cookies added of buriti oil increased serum (54.72±7.78 µg/dL) and hepatic retinol (1277.33 g / g) of rats, respectively two and six times more than that of the control group. The serum retinol contents showed strong correlation with hepatic retinol and both showed moderate correlation with FER and FCR, weight gain and with the final weight of animals. It was concluded that cookie added of buriti oil can be considered an alternative source of vitamin A, which gives it advantages over the various oils and fats added to cookies, suggesting this inclusion in the human diet should be conducted.

Keywords: cookie, lipids, *Mauritia flexuosa*, HPLC, retinol