

XXXIX Reunião de Trabalho sobre Física Nuclear no Brasil
Natal, Rio Grande do Norte, Brasil de 03 a 07 de setembro, 2016

Elemental characterization of the extract of propolis produced by *Scaptotrigona Aff. Postica* bee from Brazil

Luís Guilherme Massaki Leal¹, Cibele Bugno Zamboni¹, Jose Agostinho
Gonçalves de Medeiros², Roberto Manuel do Nascimento³, Ronaldo Zucatelli
Mendonça⁴, Simone Michaela Simons⁴

¹Instituto de Pesquisas Energéticas e Nucleares, IPEN/CNEN-SP, Brasil
luguileal@hotmail.com
czamboni@ipen.br

²Universidade Cidade de São Paulo – UNICID
Rua Cesario Galeno, 448/475, 03071-000 – Tatuapé, São Paulo, SP, Brasil
jose.medeiros@unicid.edu.br

³Laboratório Especial de Evolução e Ecologia, Instituto Butantan, São Paulo
roberto.nascimento@butantan.gov.br

⁴Laboratório de Parasitologia, Instituto Butantan, São Paulo
simone.simons@butantan.gov.br
ronaldo.mendonca@butantan.gov.br

The *Scaptotrigona Aff Postica* bee is an insect stingless belonging to Apidae family and subfamily Meliponinae. This genus occurs throughout in Neotropics. In Brazil, it is found in the northeastern mainly in the Barra do Corda County (Maranhão). Specifically, the propolis produced by this bee have several medical applications: it is used in the healing of wounds with an inflammatory process, in treatment of prostate tumors and, it has activity against herpes and rubella virus. Considering its importance in medicinal use and the great variability in relation to botanical origin, its standardization in relation to the dosage of inorganic elements is important to meet the different medical applications. The objective of this investigation was to perform its multielemental characterization using Neutron Activation Analysis technique. The measurements were performed using the IEA - R1 nuclear reactor at IPEN - CNEN/SP, Brasil. These data increase the knowledge of its inorganic components and can introduce improvements in the production these extracts of propolis, mainly as regards to toxicity.

Keywords: NAA, propolis, bee, elemental concentration

Financial support: FAPESP, CNPq and Instituto Butantan