

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## RESIDUES OF ALBENDAZOLE IN BOVINE TISSUES SLAUGHTERED IN BRAZIL

Édipo Henrique FERNANDES<sup>\*1</sup>, Juliana Heloisa Pine Américo PINHEIRO<sup>2</sup>, Camila BROSSI<sup>3</sup>, Genaro Cvabodni MIRANDA-DE LA LAMA<sup>4</sup>, Rafael Silvio Bonilha PINHEIRO<sup>1</sup>

\*corresponding author: ehfernandes88@gmail.com

<sup>1</sup>Universidade Estadual Paulista - UNESP, Ilha Solteira, São Paulo, Brasil

<sup>2</sup>Universidade Brasil, São Paulo, São Paulo, Brasil

<sup>3</sup>Universidade de São Paulo, Pirassununga, São Paulo, Brasil

<sup>4</sup>Universidad Autónoma Metropolitana, Lerma, Estado de México, México

In compliance with national and international sanitary legislation, have the importance of the control of chemical residues in beef, avoiding serious problems for the export of Brazilian products to the main consumer markets, besides guaranteeing to the consumer the harmfulness of contaminant residues in the products. The present study aimed to identify the incidence of albendazole residues and metabolites in bovine tissues (muscle, liver and kidney) slaughtered in Brazil. The study was located in 17 beef cattle establishments inspected by the Federal Inspection Service, selected in a targeted manner, due to their representativeness and export qualifications. Tissue samples were obtained from 510 beef cattle production properties. The method of analysis applied was high performance liquid chromatography (HPLC) coupled to sequential mass spectrometry. The data were submitted to the generalized linear mixed model and the occurrence variables were also submitted to the Chi-Square and Fisher's test at 5% probability. There was detection of residues of albendazole and their metabolites in bovine tissues from 10 cattle farms, with 1.98%, 0.20% and 1.19% in liver, muscle and kidney samples, respectively. All animals had residue depletion in hepatic tissue, due to organ function in the metabolism of albendazole and its short persistence in muscle tissue. Considering only the animals detected, the mean concentration of albendazole residues and their metabolites was 87.39 µg/kg for the liver, 40.16 µg/kg for muscle and 70.39 µg/kg for the kidney. The values of occurrence and concentration found in the renal tissue confirm that the urinary route represents an important route of elimination of the albendazoles. Thus, residues of this active principle in Brazilian beef do not present a risk of sanitary breach compromising food safety, since there was no result above the maximum residue limit established by the *Codex Alimentarius* and the *European Medicines Agency* on the analyzed tissues.

**Keywords:** antihelmintics, *Codex Alimentarius*, sanitary legislation, food safety.

Promoção e Realização:



Apoio Institucional:



Organização:

