In Brazil, as in other countries, antibiotics can be used in veterinary medicine to treat animal diseases. Chloramphenicol is a broad spectrum antibiotic, which makes it effective in the treatment of various infectious diseases. However, its use for veterinary practice in animals intended for human consumption was banned in Brazil and many other countries because of toxicological factors such as the development of aplastic anemia. Thus, foods of animal origin must be verified by highly sensitive and selective methods for the presence of antibiotic in order to ensure consumer safety. The objective of this study was to evaluate the presence of chloramphenicol in samples of fish, milk and honey purchased in the market of Belo Horizonte, MG, Brazil.

Chloramphenicol was extracted from the samples by solvent extraction using ethyl acetate and it was analyzed by liquid chromatography with detection by mass spectrometry (LC-MS/MS). Of the thirteen fish samples analyzed, only one showed positive result for chloramphenicol, with the concentration of 0.06 µg/kg, which is below the maximum residue limit established by legislation (0.30 µg/kg). Among the 49 samples of raw milk analyzed, 41% were positive for chloramphenicol, with levels ranging from 0.10 to 13.90 µg/L, and four samples contained concentrations above the maximum limit allowed by law (0.30 µg/L). Chloramphenicol was not found in 12 samples of honey analyzed. Therefore, these studies suggest that chloramphenicol is still being used, which demonstrates the need for control by food and health authorities.

Financial support: Fapemig, CNPq, Finep.