RESIDUES OF COPPER IN MILK FROM HEALTHY CATTLE AFTER PASSAGE IN THE FOOTBATH

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The certification of farms to be free of disease and appropriate management of waste is a goal that guides the contemporary system of production. The aim of this study was to evaluate the residues of copper in the milk of healthy cattle after repeated passes of the animals by a footbath containing solution of the copper sulfate 5%. It was used in the research, seven crossbred cows (Zebu x European) in lactating, healthy, of different ages and body weight, between the months of April and May of 2010. To study the residues in the milk the animals passed by a daily footbath containing a sanitizer until completing seven consecutive days.

The milk samples were taken before starting the passage of animals by the footbaths from the time zero (M0), 24 (M24h), 48 (M48h) to 72 (M72h) hours after the last passage through the footbath, this is, after the seventh day.

A final sample was taken on the 15th day (M15). At all times, the removal of the material from each cow was performed after complete milking and homogenization of the product. The samples were packed in suitable containers and sent to the laboratory for processing, using in the assessments from the residual levels of copper the spectrophotometry of atomic absorption. The data obtained from laboratory tests were submitted to the Jandel SigmaStat for Windows (SigmaStat for Windows, versão 3.0.1. Systat Software Inc, Richmond, CA, EUA). Comparison of moments for each sample was performed by analysis of variance (ANOVA) followed by Tukey test. The data were considered significant when P < 0.05. For copper levels, the data were significantly different (P < 0.05) between the moments M1 and M2, M1 and M3 and M1 and M15. However, there was no significant difference among the relevant moments M1, M2, M3 and M15 compared with M0. The levels decreased from M2, but this was not significant. The values remained within acceptable levels by World Health Organization. It was concluded that the successive passage, for seven days of healthy cattle in footbath containing a sanitizer with 5% of copper does not increase the level of active ingredient in the milk, and that could be an alternative in the prevention of digital diseases in this animal species.

Keywords: Sanitizer, remain level, prevention, digital diseases