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Effects of magnetic treated water on rats and cows hemogasometry

The goal of this study was to evaluate the effect of magnetic water on blood gas level of rats and cows. Twenty six jersey cows and forty-eight wistar rats were divided into two groups: control (cows=13, rats=24), drinking regular water and the group test, drinking magnetic water-treated (cows=13, rats=24). A completely randomized design was used. Blood samples were collected from caudal auricular artery in cows and from femoral artery in rats. The water treatment was performed using a commercial magnetic conditioner (Sylocimol) designed to generate a strong magnetic monopole field of 3,860 Gauss. These devices were inserted into the water troughs. No significant difference was found in the water intake between the groups. The SO_2 (91.75% vs 94.60%) was higher and levels of $CHCO_3$ (28.66 vs 25.04mmHg) and pCO_2 (53.85 vs 46.40mmHg) showed unusual reductions with the same pH and anion gap in the arterial blood of the rats drinking the magnetic water-treated and there was no difference in blood pH (7.32 vs 7.31), because of the systemic acid-base balance. On the other hand no significant difference was found on $CHCO_3$ (26.17 vs 25.87mmHg) and SO_2 (98.4% vs 98.3%) however higher pH (7.44 vs 7.40, $p<0.05$) and lower pCO_2 (37.97 vs 42.47mmHg, $p<0.05$) were found in arterial blood of cows drinking magnetic-treated water compared to control group. These effects were attributed due reduced metabolism in kidney to bicarbonate buffer production. The consumption of water treated by magnetic field provided an effective way to decreased metabolic acidosis.

Biography

Geraldo Balieiro Neto has completed his PhD from São Paulo State University and Post-doctoral studies from University of Evora. He is a Scientific Researcher in full dedication to research (40h) and a Research Director from São Paulo State Government, in Department of Agriculture and Food Supply, São Paulo Agency for Agribusiness Technology (APTA), since Jun 13, 2005. He has published more than 27 papers in reputed journals and has been serving as an Editorial Board Member of reputed.

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