EVALUATION OF EFFECTIVENESS OF ALBENDAZOLE WITH DIFFERENT PH ACCORDING TO *IN VITRO* EGG HATCH TEST WITH *HAEMONCHUS CONTORTUS*

AVALIAÇÃO DA EFICÁCIA DO ALBENDAZOL EM VARIAÇÕES DE PH EM TESTE IN VITRO *DE ECLODIBILIDADE COM HAEMONCHUS CONTORTUS*

BIANCA TAINÁ AZEVEDO[1]*, POLIANA ARAÚJO PACHECO[2], JÉSSICA CAROLINA RIBEIRO[3], LUCIANDRA MACEDO DE TOLEDO[2], CRISTIANE FERNANDES DE CARVALHO FIORIN[1], LUCIANA MORITA KATIKI[2]

[1]Faculdade Anhanguera Educacional, Campinas, SP, Brasil
[2]Instituto de Zootecnia (IZ/APTA/SAA), Nova Odessa, SP, Brazil
[3]Universidade Paulista UNIP, Campinas, SP, Brasil
*e-mail: bianca_ta@outlook.com

This study aimed to evaluate the efficacy of albendazole (ABZ) at different pH levels and different concentrations. ABZ is a broad-spectrum anthelmintic of the benzimidazole class, widely used to control gastrointestinal nematodes in animal production. Studies have shown that at low pH values the availability rate of ABZ increases. In order to evaluate whether pH could influence the efficacy of ABZ, *in vitro* hatchability tests were performed. The ABZ was diluted in distilled water previously prepared at the intended pH levels (pH 5, pH 5.5, pH 6, pH 6.5, pH 7, pH 7.5 and pH 8), as confirmed by a pH meter. The eggs were collected from artificially infected with *Haemonchus contortus*, a strain sensitive to ABZ. For each pH solution evaluated, different concentrations of ABZ (0.1, 0.3, 0.6, 1.2 and 2.5 mg mL^{-1}) were tested. Approximately 100 eggs were exposed to these concentrations and pHs, in six replicates, using a 48-well cell culture plates. The numbers of hatched and intact eggs were counting after incubation for 24 h at 27 °C. To verify if there was a difference between the tested pH values and concentrations, analysis of variance and homogeneity of variance (Levene test) were performed. There was no difference between the pHs tested at different concentrations of ABZ ($P>0.05$). The mean efficacy of the negative control (considering all pHs) was 10.36 ± 6.85% and the mean ABZ efficacy at the concentration 2.5 mg mL^{-1} (considering all pHs tested) was 90.86 ± 4.19%. We conclude that solutions of ABZ diluted at different pHs did not alter the anthelminthic efficacy at the different concentrations tested.

Keywords: albendazole; *Haemonchus contortus*; pH.