Abstract

This study assessed the applicability of a *Bacillus stearothermophilus* test for detection of the depletion of furazolidone anticoccidial drug residues in chicken tissues. Thirty-three Ross breed chicken were dosed orally with furazolidone (2 mg/kg body weight) daily for 5 days. After the last treatment the birds were sacrificed in groups of three at intervals of 1, 3, 6, 10, 24, 48, 144, 240, 360 and 480 h. Liver, kidney and breast muscle samples were collected and immediately analysed at each interval for furazolidone residues. Serum was separated from the blood collected from jugular veins into bottles containing glass beads and analysed. Supernatant from the homogenates was analysed for the presence or absence of furazolidone residues using the *B. stearothermophilus* test. Semi quantification of furazolidone residues was done by comparing the obtained zones of inhibition on a *Bacillus subtilis* test plates and the zones from calibrated standard curves. Qualitatively the *B. stearothermophilus* test was positive for furazolidone residues up to 480 h post treatment in serum samples, 360 h in liver samples, 480 h in kidney samples and 360 h in muscle samples. Semi quantitatively from the *B. subtilis* test plates, serum samples were observed to have the highest furazolidone concentration of 3.2 μg/ml. The lowest furazolidone concentration was recorded in kidney tissues at 0.21 μg/ml. Kidney and serum tissues appear to be good tissues for testing of furazolidone tissues. The Kidney samples would appear best for post-mortem screening of furazolidone residues while serum could be used antemortem screening of depletion in chicken.