Abstract
To evaluate the effect of the addition of enzyme complexes (EC) in sorghum (Sorghum bicolor) based diets on intestinal integrity of broilers, an experiment was conducted at the Poultry Laboratory Section, University Central of Venezuela (UCV), Maracay, Aragua State. One thousand two hundred of oneday-old male and female chickens (ROSS 308) were used and distributed in a randomized design with five treatments (T) and eight replicated groups, of 30 chickens each one, as follow: T1: diet based on corn-soybean (BD), T2: corn-soybean sorghum diet, T3: T2 + enzyme complex (EC) for vegetable protein (EC1), T4: T2 + EC solid-state fermentation (EC2), T5: T2 + EC1 and EC2. Length, width and integrity of the villi were measured d 21 and 35 of the production cycle of the bird. There was a significant increase of 140 at the top of the villi (VI) between T4 and T5 compared to T1, T2 and T3 to 35 days, being higher in T5 (733.4, 57.7, and 0, respectively). Also, lesions such as congestion, hemorrhage, erosion, apical enlargement, infiltration and edema were observed. Inclusion of sorghum increased the size and number of VI injuries. Reformulated EC increased the length and improved the VI integrity, reducing the harmful effect of sorghum inclusion.

Keywords
Broilers, enzymes, villi measures, intestinal integ.