



Availa® Zn Improves Intestinal Morphology and Oxidative Stress in Young Broilers



Study Objective

Compare the effects of Availa® Zn vs ZnSO₄ on performance and intestinal health of broilers under a nutritional challenge.



Animals

680 one-day-old male Ross 308 broilers

Treatments

A wheat-rye basal diet without the addition of non-starch polysaccharide enzymes was fed in order to create a nutritional challenge at the intestinal level. Dietary treatments were supplemented with 60 ppm Zn as either:

- Zn sulfate (ZnSO₄)
- Availa Zn



Study Duration

36 days



Location

Ghent University, Ghent, Belgium

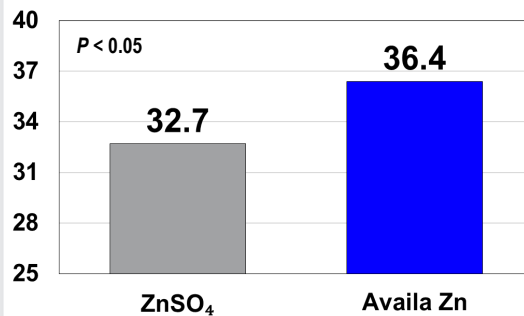


Results Summary

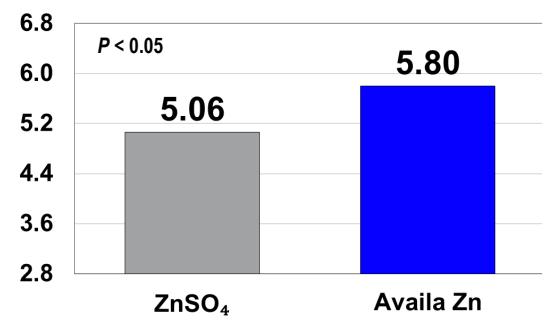
Feeding Availa Zn had the following effects:

- Increased apparent Zn digestibility
- Influenced intestinal morphology
- Promoted a change in bacterial profile in the ileum
- Mitigated effects of intestinal inflammation and oxidative stress due to nutritional challenge

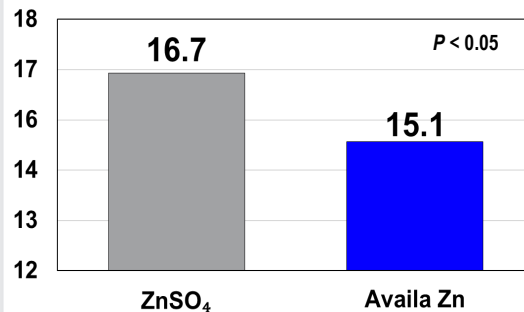
Apparent Zn Digestibility, %



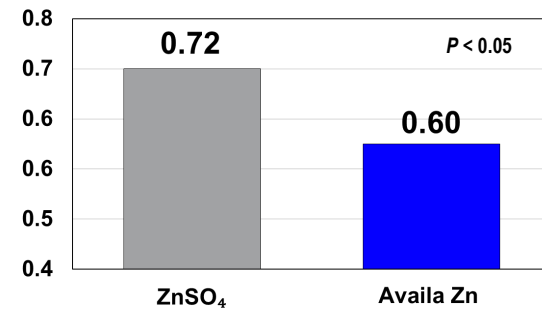
Duodenal Villus Length:Crypt Depth



Plasma MDA Concentration, mmol/L



Plasma GPx Activity, μmol/min.mL



PUBLICATION

De Grande, A., S. Leleu, E. Delezie, C. Rapp, S. De Smet, E. Gossens, F. Haesebrouck, F.V. Immerseel, and R. Ducatelle. 2020. Dietary zinc source impacts intestinal morphology and oxidative stress in young broilers. *Poult. Sci.* 99(1):441-453.

