

ENERGIZING THE COPPER MOLECULE

> MAXACTIVAT/Cu is an activated copper oxide (CuO) source produced with a novel production process. MAXACTIVAT/Cu can be included in lower concentrations in the diet than feed-grade CuO. Beside the important role of Cu in metabolic processes, MAXACTIVAT/Cu improves animal performance by an antimicrobial effect. The activated MAXACTIVAT/Cu product results in lower heavy metal excretions supporting new sustainable feeding strategies.

ACTIVATED COPPER OXIDE

Copper is an essential micro-mineral being part of many enzymes catalyzing the dismutation of superoxide radicals and the synthesis of hemoglobin. Thus, Cu plays an important role for maintenance, growth, and vitality of the animal. MAXACTIVAT/Cu is a modified type of CuO produced by an innovative production process. It has modified physiochemical properties such as smaller particle size, increased surface area, and additional energy stored inside the molecule (F1). The processing of CuO by the eccentric vibrating mill leads to MAXACTIVAT/Cu with a greater reactivity throughout the digestive tract.



CHARACTERISTICS

- Improved gut integrity
- Affects diarrhea in young animals
- Environmental friendly

APPLICATION BENEFITS

- Greater reactivity
- Lower dosage than feed-grade Cu_O

F1: Principle of mechanical activation.

Cu Molecule (CuO)



Eccentric Vibrating Mill





IMPROVED DIGESTIBILITY IN PIGLETS

Animals: Treatments:

Weaned piglets (n=16; DanBred × Piétrain); weaned at d 25
1. Depletion period (d 1-14): Cu and Zn below requirements
2. Repletion period (d 15-23): Cu and Zn to meet requirements
Test products: (1) Cu, Zn sulfates; (2) MAXACTIVAT/Cu and Zn



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The relative apparent total tract digestibility of Cu was numerically greater for MAXACTIVAT/Cu (+22%) compared to Cu sulfate (CuSO₄). In addition, the relative apparent total tract digestibility of Zn was numerically greater for MAXACTIVAT/Zn (+11%) compared to Zn sulfate (ZnSO₄). **MAXACTIVAT/Cu and MAXACTIVAT/Zn have a greater relative apparent total tract digestibility than inorganic Cu and Zn sulfate.**

IMPROVED PERFORMANCE IN WEANED PIGLETS





Source: ISF, 2019.

The average daily gain was numerically greater for MAXACTIVAT/Cu compared to $CuSO_4$ (15 and 140 ppm). The feed conversion ratio was numerically lower for MAXACTIVAT/Cu compared to $CuSO_4$ (15 and 140 ppm). MAXACTIVAT/Cu as an innovative Cu source can be used efficiently in piglet raising feeding regimes.

