

Mn

Cu

Zn

Fe

MAXCHELAT

HIGH-QUALITY GLYCINATES

MAXCHELAT products set new standards in the field of organically bound trace minerals, including copper, iron, manganese and zinc. These chelates utilize a glycine ligand to deliver optimized stability, excellent solubility and maximum bioavailability.

INNOVATIVE PRODUCTION PROCESS

PROVITA SUPPLEMENTS utilizes a patented production process to manufacture **MAXCHELAT** products with an optimum concentration of trace minerals. The metal ions (Cu, Fe, Mn and Zn) in **MAXCHELAT** are precomplexed with the amino acid glycine, which protects the molecule from reactions with other ingredients in the feed.

The particularly high bioavailability of **MAXCHELAT** allows the animal to receive the performance benefits of these essential trace minerals, even at lower supplementation levels. In addition, because the animal is better able to utilize the trace minerals, it decreases the amount of metals that enter the waste stream.

A STABLE MOLECULE DELIVERS PERFORMANCE BENEFITS

MAXCHELAT glycinates have a stable molecular structure that protects them from antagonistic interactions with other trace elements in the digestive tract, allowing them to reach the small intestine where they are absorbed into the blood stream. Thanks to the high bioavailability of **MAXCHELAT**, the absolute amount of trace minerals in the diet can be reduced by 25–50% compared to inorganic trace mineral sources (see figure 2).

MAXCHELAT has a beneficial effect on skeletal conformation and development in animals, and also on performance parameters such as birth weight, milk production and growth. **MAXCHELAT** ensures that animals receive optimal trace mineral nutrition.

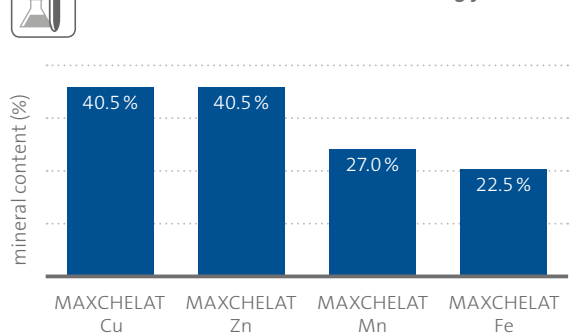


MAXCHELAT

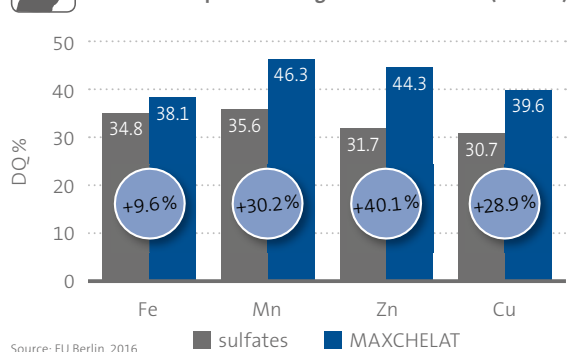
- Highly concentrated trace minerals
- Patented production process
- High bioavailability
- Increases zootechnical performance



F1: Mineral contents of the MAXCHELAT glycinates



F2: Partial apparent digestibility of MAXCHELAT minerals compared to inorganic trace minerals (sulfates)



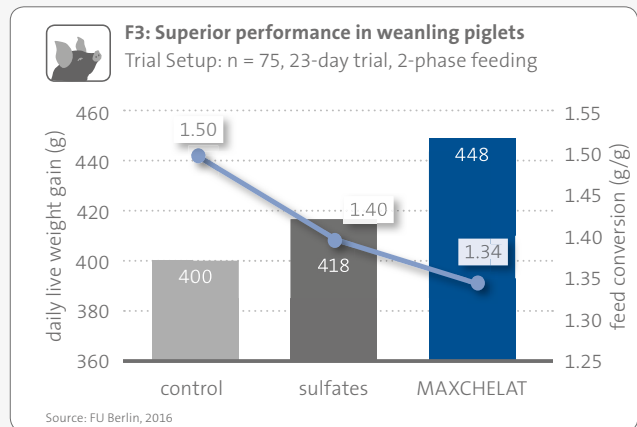
Source: FU Berlin, 2016

PERFECT COMPONENTS. MAXIMUM RESULTS.

ORGANICALLY BOUND TRACE MINERALS

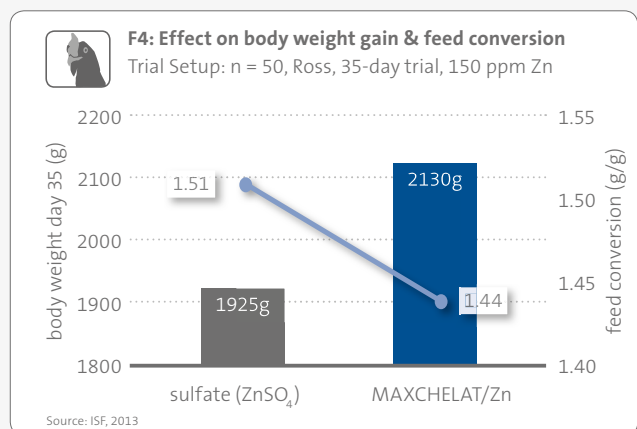
PIG NUTRITION

MAXCHELAT (Zn, Fe, Mn, Cu) products specifically target claw, joint, tendon and bone stability. These trace minerals also play a key role in various reproductive processes. When fed as part of a well-balanced diet, the trace minerals contained in **MAXCHELAT** can have a major effect on the piglets' cell protection and health status. As piglets grow, supplementation with **MAXCHELAT** continues to be advised. This is because piglets switch from a highly digestible feed during the suckling phase to a diet with comparatively poor trace mineral availability in the grow/finish phase. Figure 3 shows the effects of **MAXCHELAT** glycinate on the zootechnical performance of weaning piglets.



POULTRY NUTRITION

Supplementation of organic trace minerals is essential for poultry growth and development. Deficiencies can result in nervous system disorders, as well as skeletal abnormalities, anemia, and decreased protein synthesis. An oversupply, on the other hand, leads to increased heavy metal excretions that pollute the environment. **MAXCHELAT** ensures an optimum supply of trace minerals for poultry even when fed at reduced levels, which reduces the amount of metals that enter the waste stream. Figure 4 shows the effect of **MAXCHELAT/Zn** on the zootechnical performance of broiler chickens when compared to the supplementation of inorganic zinc sulfate.



RUMINANT NUTRITION

Ruminants demand higher supplies of trace minerals because of the nature of their digestive system and the variability of their basic ration. Factors such as the antagonistic nature of sulfur and interactions between trace minerals and the components of the ration can all affect the eventual availability of the mineral to the animal. Organic trace minerals, such as those found in **MAXCHELAT**, are better absorbed and retained by the animal optimizing growth and performance.

MAXCHELAT organic trace minerals significantly reduce negative interactions and prevent potential deficiencies in the animal. Figure 5 shows the positive impact of **MAXCHELAT** on daily live weight gain in calves.

