

# **Organic trace minerals**

Trace minerals are essential to maintain fertility, health and immunity. Optimin® organic minerals are protected and easily absorbed, minimising risk of malnutrition. Optimin supports the animal to have an optimal mineral status contributing to health and improved performance. A superior trace mineral source can reduce variability in the herd leading to better overall profits.

The nutritional success of any trace mineral depends on its ability to be absorbed in the small intestine.

That is related to the capacity of the ligand to hold onto and help it survive the environment of the gastrointestinal tract until its absorption.

Optimin organic trace minerals have been specially formulated to have excellent bioavailability.

Optimin has high bond stability, allowing it to maintain its structure under acidic conditions, such as is typical in the stomach.

**bonds too weak** disassociate in stomach

**bonds too strong** transporters cannot cleave

CUSO<sub>4</sub>

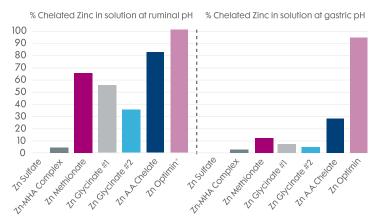
**Optimin** 

CuO





## Optimin<sup>®</sup> chelates resist disassociation at varying digestive pHs



Source: Trouw Nutrition R&D, 2009

#### Why Optimin® works

"Optimin® trace minerals have been demonstrated to have stronger bond strength but also greater stability compared to other complexes at various pHs typically found in the gastrointestinal tract."

#### 1. Simply supplying trace minerals is not enough

The aim of any trace mineral program is to efficiently supply trace minerals for optimum mineral nutrition and bioavailability plays an important role.

Bioavailability is the capacity of a trace mineral to be absorbed and utilised within the animal.

### 2. With Optimin, more of the trace mineral is available for absorption

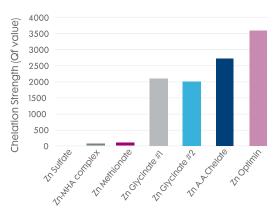
A key characteristic of Optimins is their high bond strength and stability at various pHs. This allows more of trace minerals to enter the gastrointestinal tract as an intact chelate for absorption.







# Optimin® In has the highest bond strength compared to other chelated minerals



Source: Trouw Nutrition R&D, 2009

## 3. Optimin has been designed to minimise the effect of antagonists

Antagonists, such as phytate, are another factor that can affect bioavailability. These antagonists can bind to free (unbound) trace mineral and render them unavailable to the animal due to their high bond strength. Optimin prevents this by maintaining its bonds at low and high pH. Its high bond strength reduces the amount of free trace minerals.

| Product name | Technology    | Mineral content |
|--------------|---------------|-----------------|
| Optimin° Zn  | Chelate       | 15%             |
| Optimin Cu   | Chelate       | 15%             |
| Optimin Mn   | Chelate       | 15%             |
| Optimin Fe   | Chelate       | 15%             |
| Optimin Co   | Chelate       | 10%             |
| Optimin ZMC  | Chelate blend | 8% - 4% - 2%    |







Our numerous food safety and quality certifications mean sellers and users from around the world can be confident when they turn to intelliBond trace minerals.

#### **Benefits offered by Optimin**



## Optimin in broilers, breeders, and layers

- Hatchability
- Laying rate & laying persistency
- · Skin, feathering, foot pad, egg shell quality
- Survival rate



### Optimin in ruminants

- Fertility & reproductive performance
- Udder health (reduced milk SCC)
- Hoof integrity



#### Ask you Trouw Nutrition representative how Optimin can support animal productivity and health.

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