



## Feed chelate

# MetStar Zn



## Zinc methioninate



We enhance nature  
www.arkop.pl

### Description and performance

**Metstar Zn is an zinc amino acid chelate feed based on methionine, whose quality has been proven by tests. Metstar Zn – manufactured on the basis of Arkop's proprietary technology – is characterized by a very high level of chelation and perfect mixability.** It is a stable chelate with a broad pH range which supplying the animal's organism with not only the required mineral – zinc, but also a very important factor for the ruminants' diet – methionine.

### Methionine (MET) and its role

**Methionine is a very important exogenous amino acid from the sulfur amino acid group.** Methionine forms cysteine, the second most important sulfur amino acid. Methionine also takes part in the muscle protein synthesis processes and in over 100 metabolic processes.

In the animal's organism it plays a number of functions, inter alia:

- as a sulfur-containing amino acid comprised in ceratine, it is one of the main building blocks of fur, hair, skin, claws and hoofs
- it has detoxicating effects – indispensable for increasing the synthesis of glutathione which cleans the liver of toxins such as free radicals or heavy metals
- it prevents formation of calculi and has biligenic properties (it protects the urinary tract and biliary tract against inflammations as it prevents formation of deposits)
- it significantly impacts the animal's overall immunity
- it participates in creation of choline and epinephrine.

As an amino acid that is not produced by the animal organism, methionine should be regularly supplied in the feed (methionine together with cystine are classified as the first amino acid limiting growth in the diet of poultry and the third one in the case of pigs). Whereas the usual feed materials (e.g. soybean meals) contain insufficient quantities of this precious amino acid. Satisfaction of the animal's demand without this amino acid would require application of an extremely high level of protein in the feed. Such feed would be expensive, much more burdensome for the animal's organism and natural environment (high nitrogen emissions into the air).

### Role of zinc in the animal organism

Zinc deficiency leads to parakeratosis, matt hair, skin diseases, somatic cells in milk, hoof diseases, ovary atrophy and, consequently, difficulties with impregnation and ovulation cycle disorders, and higher infectious disease incidence.

### Why chelates

Apart from traditionally used feed additives, we are one of the few companies in Poland that provides clients with interesting biotechnology solutions, namely high class feed chelates, i.e. organically bonded microelements.

Organic forms of microelements (chelates) are composed of a metal atom combined by means of a coordination link with such compounds as protein hydrolyzates or single amino acids.



# MetStar Zn



## Vitamin protection

In the chelation process, microelement particles in the chelates are neutralized (deprived of electric charges) thanks to which they do not cause deactivation of vitamin C, E and vitamins from group B. The bonding of these particles with amino acids neutralizes the antagonisms between the microelements supplied in the organic form.

## EFFICACY

Chelates are absorbed by the animal organism in the way typical of amino acids with which microelements are bonded. This significantly expedites and facilitates assimilation of the microelements supplied and supports their direct delivery to the place where they are needed most.

## BIOAVAILABILITY AND ECOLOGY

Nearly complete bioavailability of chelates also makes it possible to reduce the dose of the microelement, with simultaneous increase of its uptake by the animal, and thus significantly improves production results. Many of our chelates are characterized by biodegradability.

Item	MetStar Zn
EU registration no.	3.1.3
Zinc	18.5%
Methionine	80%

## EFFICACY OF THE MetStar Zn CHELATE:

### Cattle:

- lower susceptibility to infections
- reduced number of somatic cells in milk
- better skin and hair condition
- increased hoof hardness and elasticity
- shorter calving intervals
- increased fertility
- regulated cation-anion balance in the rumen
- reduced metabolic diseases.

## ARKOP

We have been building our experience in the animal nutrition industry since 1992. Our goal is to manufacture feed additives making it possible to derive the very best nature has to offer... For this reason, our extensive product range entails the latest developments in biotechnology, in particular top grade chelates (chelation level confirmed by authorized laboratories).

As a result of our close long-term cooperation with scientific institutes and universities, we have manufactured proven and effective products. We constantly monitor our production process and incorporate the requisite modifications in striving to continue improving our offer and aligning it to meet customer needs and expectations.

We apply and constantly develop our integrated food quality and safety management system **ISO 22000 (HACCP)** and **ISO 9001**. As a confirmation of adherence to the most stringent requirements in this area, we have obtained the integrated management system certificate - **PN-EN ISO 9001:2009** and **HACCP - PN-EN ISO 22000-2006**. We also have the European quality system certificate for feed additives and premixes **FAMI-QS**.

Caring for the right quality of our feed products, we have joined European producer organizations, TREAC and EMFEMA, thanks to which we keep track of prevailing requirements regarding feed additives and adapt our production to satisfy them. Consequently, we can ensure that application of our feed additives is safe for the health of animals and brings great animal rearing results. Currently we work with customers from across the world.



ARKOP Sp. z o.o.  
Poland, 32-332 Bukowno  
ul. Kolejowa 34a  
tel.: +48 32 649 44 51  
arkop@arkop.pl | www.arkop.pl

We enhance nature

