The Application of MHA-Zn in Aquaculture Feed

Zinc is one of the important essential trace minerals nutrition for aquatic animal, which participating in almost all metabolic activities of animals as the main life element. Suitable dosage of zinc source added in the aquatic diet can improve the growth performance and bone growth, enhance the immunity and productivity, maintain the normal structure and function of the skin and mucous membrane.

Lack of zinc will lead to the slow growth performance, low immunity, low enzyme activity, poor DNA synthesis and cell division ability on aquatic animal. With the development of aquaculture, the type of dosage will be developed from inorganic zinc to organic zinc, MHA-Zn is one of the most cost performance products in organic products.

The feature of Calimet Zn (MHA-Zn)

1. Stable chemical structure

There is a carboxyl group and hydroxyl group in the hydroxyl methionine molecule, which can form a five membered ring structure collaborated with the zinc ion in the form of ions bond and the coordination bond, so the hydroxy methionine zinc has good stability. Dissociation, caking and moisture absorption of trace minerals are not easy to happen, making sure the accuracy of formula. Meanwhile, it will not destroy the nutrition of vitamins, enzymes and lipid in the feed, to make sure the stability of the feed or premix. In the other hand, it is not easy to form insoluble substances with other nutrients in animal digestive tract, which will not affect the digestion and absorption of other nutrients.

2. Dual nutrition with optimal cost performance

Calimet Zn is the new type of organic trace minerals in the nutrition value era of trace minerals, with its dual nutrition (trace minerals nutrition and methionine nutrition), it can avoid the problems caused by the methionine lack of.

3. High bioavailability

It is proved by the application test of MHA-Z in recent years, Calimet Zn can avoid the antagonism among trace minerals with its high bioavailability (it is 130%-380%, compared with the zinc sulphate), which can meet the nutrition demand of aquatic animal in special growth period and protect the environment at the same time.

The application of MHA Zn on aquatic animal

The research and application of safe, stable, efficient and eco-friendly new type trace minerals has been concerned for long time, the application of MHA-ZN on aquatic animal has been studied by experts step by step.

The experiment (2012) carried out by Dr. Nianhua Zhu proved that, 50 mg/kg zinc sulphate and 50 mg/kg MHA zinc has been add in the diet feed of Crucian carp respectively, the results showed that the ADW increased by 6.13%, ADG increased by 5.58% and special growth rate increased by 4.20% in the group added with MHA zinc, compared with the group added with zinc sulphate. In one word, adding MHA zinc to Crucian carp diet is better than adding inorganic zinc sulphate to improve the production performance of Crucian carp.

The experiment (2012) carried out by Chunyan Mo found that, MHA zinc has the advantages of improving growth performance, promoting zinc deposition in vertebrae and improving antioxidant capacity of Crucian carp to compare with the inorganic zinc sulphate. The relative availability of zinc methionine group was 181% and 312%, respectively, with zinc deposition in vertebrae and serum SOD as evaluation indexes.

The experiment (2014) carried out by Erlong Wang found that, the relative availability of zinc methionine group was 153-273%, average complex was 200.33%, with the growth performance, non-specific immune enzyme activity and zinc deposition in body tissues as evaluation indexes. It not only promotes aquatic animals' growth performance, immunity and antioxidant capacity well, but also protects the environment well.

Calimet Zn with high bioavailability, can fulfill the nutrition demand of animals by supplying trace elements and methionine nutrition in one time, improve the gut health condition, increase the DWG and promote the growth performance; Enhance immunity, improve disease resistance and survival rate; Surface color pretty and fatness, suitable for long distance transportation; Promote shell formation and hardening of shrimp and crab, which is a kind of safe, high efficient new type zinc source, widely applied in aquatic animal.