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Chelated Minerals



Product manufactured in Iran



## Chelamin: Knowledge of Chemistry and Animal Feed Nutrition

Trace Minerals Play Crucial Biological Roles in the Body, including functions in immunity, oxidative metabolism, nutrient and energy metabolism, reproductive activities, and more. Deficiencies in trace elements such as Zn, Mn, and Cu lead to numerous metabolic issues in livestock and poultry.

Iron and copper play vital roles in joint health, the growth and health of wool, hair, and feathers, blood cell production, enhancing immune function, improving fertility, and iron metabolism. Zinc and manganese are also critical for protein synthesis, improving immune function, vitamin metabolism, strengthening the antioxidant system, enhancing fertility, and maintaining skin health. These elements also serve as cofactors for many key enzymes involved in the body's overall metabolism. Chromium has a fundamental role in glucose-insulin metabolism.

The inorganic forms of trace minerals, such as oxides and salts, typically have low bioavailability. The bioavailability of these minerals can be significantly enhanced by producing organic complexes containing trace mineral

## Micronutrients in the form of Polycarboxylated Chelates

Polycarboxylated chelates, while highly soluble in water, maintain their stability across a wide pH range, do not interact with other antagonists present in the feed, and are easily absorbed in the intestine with high efficiency. Hemand Ecofarm, leveraging the knowledge and expertise of distinguished Iranian chemists and animal nutrition specialists, has developed and launched an exceptional product called Chelamin (Polycarboxylated Chelates) in

## Chelamin

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Chelamin polycarboxylated chelates have high solubility in neutral and acidic pH. These soluble organic chelates retain minerals within their molecular structure through non-covalent bonds, preventing them from reacting, particularly with elements like calcium and magnesium, which are abundant in animal feed. The primary goal of producing these organic complexes is to enhance the intestinal absorption efficiency of trace minerals. Research has shown that polycarboxylated organic chelates are rapidly absorbed through intestinal transporters and enter the bloodstream. The high stability of these chelates in the digestive system makes them an excellent option for supplying trace minerals

Research has shown that organic chelates are generally more effective when animals have high nutritional demands. This increased need typically occurs during pregnancy, lactation, egg-laying, reproductive stress, rapid growth, weaning, environmental stress (such as heat and .cold stress), and illnesses

| Product          | Element   | Elemental Concentration (mg per kg of product or ppm) |
|------------------|-----------|---|
| ChelaMin Zn 20   | Zinc      | 200000  |
| ChelaMin Mn 20   | Manganese | 200000  |
| ChelaMin Cu 20   | Copper    | 200000  |
| ChelaMin Fe 15   | Iron      | 150000  |
| ChelaMin Cr 2000 | Chromium  | 2000  |
| ChelaMin Se 2000 | Selenium  | 2000  |



| Product    | Target<br>animal            | Consumption amount              | Element   | Elemental Concentration (mg per kg of product or ppm) |
|------------|-----------------------------|---------------------------------|-----------|---|
| ChelaMix 5 | Dairy cow  expected calving | 7 grams<br>per head<br>per day  | Zinc      | 73500   |
|            |                             |                                 | Manganese | 39000   |
|            |                             |                                 | Copper    | 11000   |
|            |                             |                                 | Selenium  | 330   |
|            |                             |                                 | Chromium  | 1860  |
| ChelaMix4  | Poultry<br>AquaCulur        | 500 grams<br>per ton<br>of feed | Zinc      | 55000   |
|            |                             |                                 | Manganese | 60000   |
|            |                             |                                 | Copper    | 8000  |
|            |                             |                                 | Iron      | 10000   |



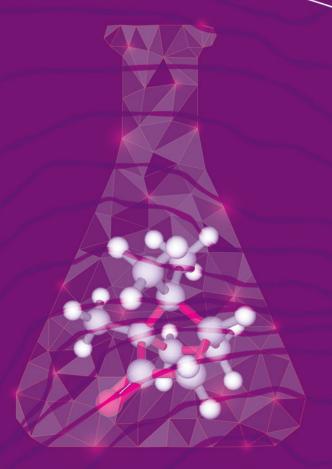
Target animal: Livestock, poultry, aquatic animals, and pets. Packaging: Available in 10 kg and 25 kg bags made of three-layer composite material.

Storage conditions: Keep in a dry, cool place, away from direct sunlight.

Dosage and usage: instructions: Use as recommended by the nutrition consultant. For further information, please contact the experts at Hemand Company.









🦳 All products offered are the exclusive property of Hemend Farm, and any utilization of them is only permitted with written authorization from the company

The term "Hemand" is an ancient root of the word (Hamun), which means plain and meadow, representing the landscape of nature, pastureland free from modern concerns where livestock graze

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