# L.S MINERAL GRANULAR POWDER

## *(Calcium, Phosphorus, Magnesium, Sodium, Iron (as Ferrous), Zinc, Manganese, Copper, Cobalt, Iodine, Selenium)*

**SUMMARY OF PRODUCT CHARACTERISTICS**

**1. NAME OF THE VETERINARY MEDICINAL PRODUCT**

L.S MINERAL ORAL GRANULAR POWDER

**2. QUALITATIVE AND QUANTITATIVE COMPOSITION**

Each Kg Contains:
Calcium …….. 155gm
Phosphorus ……135gm
Magnesium …….. 55gm
Sodium ……. 45gm
Iron (as Ferrous) …….. 1gm
Zinc …… 3gm
Manganese ……. 2gm
Copper …… 0.6gm
Cobalt …… 0.01gm
Iodine..... 0.04gm
Selenium ..... 0.003gm

**3. PHARMACEUTICAL FORM**

Oral Granular Powder

**4. CLINICAL PARTICULARS**

**4.1 Target Species**

Cattle, Goat, Sheep, Horse & Camels

**4.2 Indications for use, specifying the target species**

It is indicated to increase milk, meat and wool production. It is used for the prevention of deficiency symptoms like reduced fertility, lower conception rate, RFM, body weakness, decreased immunity, irregular heat cycle, pica, milk fever, red water and osteomalacia etc.

**4.3 Contraindications**

Not to be used in animals known to be hypersensitive to the active ingredient.

Gastrointestinal obstruction during drug administration via tube

## 4.4 Special Warnings for each target species

Not applicable.

## 4.5 Special Precautions for Use

### i. Special precautions for use in animals

For cattle, a diet with a higher content of hay and root vegetables is recommended during treatment. Core feed should be excluded from the feed ration and gradually added after the health condition improves

### ii. Special precautions for the person administering the veterinary medicinal product to animals

People with known hypersensitivity to the active substances should avoid contact with the veterinary medicinal product.
Avoid contact with eyes, skin, and mucous membranes.
Wash hands thoroughly after handling the product.
Keep out of reach of children.
In case of accidental self-injection, seek medical advice immediately and show the package leaflet or the label.

## 4.6 Adverse reactions (frequency and seriousness)

Not Known.

## 4.7 Use during pregnancy, lactation or lay

The administration of the drug during pregnancy and lactation is not restricted.

## 4.8 Interaction with other medicinal products and other forms of interaction

None known.

## 4.9 Amount(s) to be administered and administration route

Should be used daily in feed on per head basis to avoid deficiency symptoms.

- Dairy Cattle: 100-150 grams.
- Heifers/Fattening animals: 50-100 grams.
- Calf/Sheep/Goat: 10-20 grams.
- Camel/Horses: 70-100 grams.

## 4.10 Overdose (symptoms, emergency procedures, antidotes), if necessary

There is no clinical experience with overdose.

## 4.11 Withdrawal period(s)

No Withdrawal Period.

## 5. PHARMACOLOGICAL PROPERTIES

**Pharmacotherapeutic group:** Stomachic, Ruminant
**ATCvet code: QA16QA52**

### 5.1. Pharmacodynamic properties

Calcium is absorbed in the small intestine via active transport, influenced by vitamin D, pH, and diet. It's distributed throughout the body, primarily stored in bones, and excess is excreted in urine and feces. Phosphorus absorption also occurs in the small intestine, enhanced by vitamin D, with distribution similar to calcium and excretion primarily in urine. Magnesium is absorbed in the small intestine, influenced by dietary components and other minerals, distributed throughout the body with a significant portion in bones, and excess excreted in urine. Sodium is readily absorbed in the small intestine, acting as the primary cation in extracellular fluid, maintaining fluid volume and electrolyte balance, with excess excreted in urine. Iron is absorbed in the small intestine, enhanced by stomach acid and vitamin C, used for hemoglobin production and stored in the liver, spleen, and bone marrow, with excess excreted in feces. Zinc is absorbed in the small intestine, distributed throughout the body, playing a role in numerous enzymatic reactions, and excess is excreted in feces. Manganese is absorbed in the small intestine, distributed throughout the body, involved in various metabolic processes, and excess is excreted in feces. Copper is absorbed in the small intestine, distributed throughout the body, involved in various enzymatic reactions, with excess excreted in feces. Cobalt is absorbed in the small intestine, used to synthesize vitamin B12, and excess is excreted in urine. Iodine is readily absorbed in the small intestine, concentrated in the thyroid gland for thyroid hormone synthesis, and excess is excreted in urine. Selenium is absorbed in the small intestine, distributed throughout the body, involved in antioxidant and metabolic processes, and excess is excreted in urine.

### 5.2. Pharmacokinetic properties

Absorption primarily occurs in the small intestine, though specific mechanisms and influencing factors vary. Calcium and phosphorus absorption are enhanced by vitamin D, while magnesium absorption is affected by dietary components and other minerals. Sodium is readily absorbed. Iron absorption is aided by stomach acid and vitamin C. Zinc, manganese, copper, cobalt, and selenium are also absorbed in the small intestine, though specific transport mechanisms differ. Following absorption, these minerals are distributed throughout the body. Calcium, phosphorus, and magnesium are primarily stored in bones. Iron is used for hemoglobin production and stored in the liver, spleen, and bone marrow. Iodine concentrates in the thyroid gland. While not metabolized in the same way as drugs, these minerals participate in various physiological processes. Excretion pathways also vary. Calcium and manganese are eliminated in both urine and feces. Phosphorus, magnesium, sodium, cobalt, iodine, and selenium are primarily excreted in urine. Iron, zinc, and copper are mainly excreted in feces.

## 6. PHARMACEUTICAL PARTICULARS

### 6.1 Incompatibilities

None known.

## 6.2 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 2 years
Shelf life after first opening the immediate packaging: 15 weeks

## 6.3 Special precautions for storage

Store below 30°C in a dry place.
Do not store in the refrigerator or freezer.
Protect from light and moisture.
Keep out of the reach of children.
To be used as directed by the registered veterinary practitioner only.

## 6.4 Nature and composition of immediate packaging

Package size:

- Metalized Aluminum Foil pouch for 1kg
- Plastic Bags for 5kg
- Woven Bags for 20kg & 25kg.

## 6.5 Special precautions for the disposal of unused veterinary medicinal product or waste materials derived from the use of such products, if appropriate

Any unused veterinary medicinal product or waste materials derived from such veterinary medicinal products should be disposed of in accordance with local requirements.

## 7. MARKETING AUTHORISATION HOLDER

Nawan Laboratories (Pvt.) Ltd.
Plots No. 136-138, Sector-15,
Korangi Industrial Area, Karachi-74900, Pakistan.

## 8. MARKETING AUTHORISATION NUMBER

Reg. No.: 021306

## 9. DATE OF FIRST AUTHORISATION

Date of Reg.: 11-05-1998

## 10. DATE OF REVISION OF TEXT

20-01-2025