

For Veterinary Use Only

MINALYTE[®]

Oral Solution

Veterinary Mineral-Amino acid combination

COMPOSITION

Minalyte Oral Solution; **Minalyte Oral Solution** is a clear, pink colored, odorless, liquid solution containing 74.15 g phosphor, 1.525 g sodium, 2.65 g Magnesium, 30.72 g Calcium, 0.276 g copper , 1.05 g potassium, 0.28 g manganese, 1.125 g iron, 0.65 g zinc, 0.25 g cobalt, 10 g methionine, 5 g Lysine in each liter.

PHARMACOLOGIC PROPERTIES

Minalyte oral solution is a balanced mineral amino-acid combination prepared for regulation of mineral amino-acid balance of domestic animals having Calcium, Phosphor, Potassium, Magnesium and Sodium salts and Copper, Iron, Cobalt, Zinc trace elements and Methionine and Lysine amino-acids. Mineral substances and trace elements are critical coenzymes required for activation of effects of biologically important substances such as hormones, enzymes, vitamins and other functional proteins. Any deficiency may cause specific or non-specific disorders in cell metabolism. **Calcium** exists in tissue and bone structures and is necessary for a healthy bone, muscle and nerve function. It is essentially responsible for blood coagulation. It induces activation of cortex of reticulo-endothelial system and adrenal glands. **Phosphor** has a regulatory effect on acute and chronic metabolic anomalies and reproductive activities due to its effect on intermediate metabolism. It is necessary for healthy growth of bones and teeth and their protection. **Potassium** is essential for preservation of cellular integrity and healthy nerve and muscle functions. **Magnesium** is necessary for bone and teeth formation and preservation of normal muscle functions, while **Sodium** is essential for preservation of healthy nerve and muscle functions. **Iron** is incorporated in the structure of hemoglobin required for transportation of oxygen from lungs to body cells. In case of deficiency, decrease in immune response and cell-mediated immune anomalies may be observed and capability of neutrophile to kill bacteria may obviously be decreased.

Cobalt is the central atom of cyanocobalamine molecule. It is particularly important for anemia and balance of nervous system. It plays a role in erythrocyte formation and enzymatic processes. **Zinc** is an essential mineral for a healthy skin, fur and nail condition, reproductive functions, development of bones and cartilage, lipid and protein metabolism and enzymes and immune system. It has a vital role in DNA synthesis.

Copper is an element that plays a role in several enzymatic activities of the organism as a coenzyme or activator. Its activation in energy and protein metabolism is important for formation of hemoglobin, keratin, melanin, cerebrocyte and bone matrices. Copper in circulation is retained by the liver and binds to certain tissue proteins.

Manganese exists in all body tissues as an important trace element. It acts as an anti-oxidant and helps normal blood coagulation. **Manganese** plays an important role in key enzyme of glucose metabolism. It is effective in sexual hormone synthesis and nerve development and functions. It is incorporated in the structure of bones and many enzymes. Manganese affects on growth and development of bones. It is also necessary for cartilage tissue, steroid synthesis and glucose use. It also operates natural killer cells. It helps digestion together with B1 vitamin and choline and facilitates transformation of fatty materials.

Amino-acids are used in synthesis of tissues, blood, enzymes, hormones and any protein needed for the body and other non-protein nitrogenous substances. Amino-acids are also used in synthesis of certain substances such as nucleic acids, some hormones and creatine. They also increase the absorption of minerals through digestive system by forming a chelate with minerals.

AREA OF USE/INDICATIONS

It is used for treatment, prevention and supporting of specific or nonspecific diseases caused by deficiency, insufficiency of or imbalances between amino-acids, minerals and trace elements in its composition.

It is used for increasing milk, meat and fleece productivity, meeting the need for minerals increasing during pregnancy and lactation period, bone disorders, skin disorders due to zinc, anemia caused by iron and cobalt (Vitamin B12) insufficiencies in fattening and dairy animals, providing a balanced and compatible development of muscular and skeletal systems in new-born and very young animals, for protection of integrity of epithelial tissue, correction of metabolic disorders due to mineral deficiencies, prevention of excessive cold, heat, transportation, noise, vaccination and stress cases and resolving such situations without damage, rapid correction of digestive system disorders combined with various enteric diseases, particularly calf diarrhea, and as a supportive agent for increasing meat and egg productivity, increasing utilization of feed, prevention of negative effects on the animal posed by stress factors such as vaccinations, climate and maintenance conditions, for treatment of dehydration and diarrhea, increasing offspring productivity and general resistance of the body in poultry.

USAGE AND DOSAGE

Minalyte oral solution is used in all animal species by adding in drinking water.

Dose Table

ANIMAL SPECIES	DOSE
Fattening cattle	by adding 20 ml/100 kg L.W. in 1 L water
Pregnant and lactating cattle	by adding 30 ml/100 kg L.W. in 1L L water
Calves, pregnant and lactating sheep and goats	by adding 15 ml/50 kg L.W. in 0.5 L water
Sheep and goats	by adding 10 ml/50 kg L.W. in 0.5 L water
Lambs and yeans (up to 25 kg)	by adding 5 ml / 0.5 L water
Layer chickens and turkeys	1 L/ 1000 kg L.W.
Broiler chickens and chicks	0.25 – 0.5 L/ 1000 kg L.W.

UNDESIRE/SIDE EFFECTS

It has no undesired effects if used at recommended dose and usage.

DRUG INTERACTIONS

It should not be used in combination with other drugs due to intensified minerals in its composition. It was reported that mineral substances may cause a decrease in absorption and bioavailability by interacting with drugs.

SYMPTOMS OF OVERDOSE, PRECAUTIONS AND ANTIDOTE

In case it is administered more than 10 times the specified dose and at repeated doses, it may cause chronic mineral poisonings (particularly copper and zinc). If consumed at high amounts in concentrated form, acute poisoning may be observed depending on the dose especially due to trace minerals. Stomach should be emptied immediately after consumption and absorbent substances (active carbon) and chelate-forming (Na EDTA) substances should be given.

WARNINGS ON DRUG RESIDUES IN FOOD

Withholding Period (WHP) is zero (0) days for meat and milk.

CONTRAINDICATIONS

No contraindications were reported in animals at specified doses.

GENERAL WARNINGS

Consult your Veterinary Surgeon before using and in case an undesired effect is observed. Keep out of reach of children.

STORAGE CONDITIONS AND SHELL LIFE

Store at room temperature (15 – 25 °C). Protect from light.

Shell life is 2 years from production date.

COMMERCIAL PRESENTATION FORM INDICATING THE QUALITY AND QUANTITY OF THE PACKAGE

Offered for sale in 1 , 2.5, 5 and 20 L high-density polypropylene, white colored plastic packages.

PLACE AND CONDITIONS OF SALE

Sold with Veterinary Surgeon's prescription in pharmacies and veterinary surgeries (VSP)

APPROVAL DATE OF PACKAGE INSERT: 06.06.2006

**MINISTRY OF AGRICULTURE AND RURAL AFFAIRS MARKETING AUTHORIZATION DATE - NO :
06.06.2006 16/203**

NAME AND ADDRESS OF MARKETING AUTHORIZATION OWNER:

Alke Sağlık Ürünleri San. ve Tic. A.Ş

Dolayoba, Çınardere Mh. 3. Petek Sk.

No: 18, 34896 Pendik-ISTANBUL

NAME AND ADDRESS OF MANUFACTURER COMPANY:

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Merkez Organize Sanayi Bölgesi 2. Kısım 10. Cadde No:7 Tokat

SERIAL NO

PRODUCTION DATE

EXPIRY DATE

RETAIL SALES PRICE (VAT INCLUDED)