

PACKAGING

- 20 L
- 100 L
- 210 L

VIT.A-D3-E-B12

LIQUID VITAMINS (CUSTOMIZABLE FORMULA)

Diseases related to vitamin deficiencies

COMPOSITION

Vitamine A

Vitamine D3

Vitamine E

Vitamine B12

Selenium

Dosage

10 ml for 10 L of water or 1 L for 1000 L of water for 4-5 days

VITAMIN A

Vitamin A (growth vitamin): fat-soluble (name of the disease: avitaminosis).

Vitamin A deficiency promotes mucosal damage and the development of infectious germs. It also promotes vision problems (eye and eyelid inflammation), weakness, uncertain gait, ruffled feathers and, at the time of the autopsy, the presence of whitish pustules on the mucous membranes of the pharynx, larynx and esophagus. Partial vitamin A deficiency cause malformations.

Roles

- Vitamin A builds up resistance to infections and promotes the production of antibodies.
- It determines uterine environment and embryo survival (chicks).

Vitamin A deficiency

- Growth arrest
- Decreased resistance to infections
- Fertility loss
- Extreme deficiency → Animal death

VITAMIN D

Roles

Vitamin D is also called the antirachitic vitamin since it enables skeleton and muscle development. It is also involved in egg shell development. Vitamin D is fat-soluble.

Vitamin D3, also called cholecalciferol is either absorbed in the intestine through food intake or synthesized at the skin level. D3 becomes active after having been transformed by the liver and kidneys (calcitriol, the only active form). It then acts on the intestine by promoting calcium absorption at the bone level and calcium salt fixation.

Vitamin D can only work if the diet contains enough calcium and phosphorus.

Consequences of a deficiency

Rickets and bone deformation in young animals. The embryo dies shortly before hatching (poor position, weak skeleton, beak unable to pierce the shell). Small and fragile eggs.

VITAMIN E

Vitamin E is the fertility vitamin and influences brain development. Even though it does not require a great amount, it plays an important role in reproduction.

Vitamin E refers to a set of tocopherols from the plant world that acts as an antioxidant inside the body. Its action is only possible if selenium is present in sufficient quantity.

Roles

Vitamin E is necessary for brain formation. It also influences fertility, allows hatching of eggs, is an antioxidant of fats and it promotes the absorption of fat-soluble vitamins.

Consequences of a deficiency

Brain lesions in chicks, muscle and nervous problems: loss of member movement control in young animals; permanent sterility in adult males; non-productivity in females: problems with ovaries, mortality of embryos in the egg from 84 to 96 hours after incubation (bloody ring), sometimes combined with a selenium deficiency.

VITAMIN B12

Vitamin B12 is the anti-anemia vitamin, promoting the red blood cell function. It is essential to the proper growth of young animals and promotes egg shell quality.

Vitamin B12 is also called cyanocobalamin. This vitamin is fat-soluble and requires cobalt to operate.

Roles

Vitamin B12 fulfills several important roles: essential to the growth of chicks, it contributes shell quality and prevent blood problems (i.e. anemia).

Consequences of a deficiency

Weaker growth of young animals, leg deformities (bones, tendons) in chicks: 1 or 2 leg tendon spreads (also called perosis), skin problems, lack of motor coordination, nervous disorders, embryo mortality after about 20 days of hemorrhages, atrophied legs, head wrongly placed in the egg.

SELENIUM

Antioxidant acting in synergy with vitamin E. Selenium is essential for avian species. It prevents exudative diathesis in chicks with dietary vitamin E deficiency as well as muscular dystrophy and pancreatic fibrosis. Selenium, as a component of glutathione peroxidases and thus by its stimulation of lipid and vitamin E absorption, contributes to the destruction of peroxides and maintenance of sub-cellular membrane integrity by preventing unsaturated lipid peroxidation.

Consequences of a deficiency

Feed rations are often energy high (rich in lipids) and, when given at certain periods (growth, fattening, reproduction...), increase the need for vitamin E and selenium. These two elements contributes to the protection against oxidation processes. Inadequate supply leads to deficiencies that manifest themselves as growth and reproductive disorders, muscle problems, exudative diathesis, dystrophy, weak muscle growth, and pancreatic fibrosis.

A word of caution, the toxicity of selenium can occur rapidly due to the close interval between active and toxic doses. It is therefore always necessary to make an overall assessment of all possible selenium sources before starting a supplementation.



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