# VALACK B12
## CRECEDOR

**VITAMINS WITH MINERALS**

**PHARMACEUTICAL FORM:**
INJECTABLE SOLUTION

**COMPOSITION:**
**Each 100 ml contains:**

| | |
|---|---|
| Phosporylcholine | 12 g |
| Dextrose | 5 g |
| Sodium acetate | 0.150 g |
| Calcium Chloride | 0.015 g |
| Potassium Chloride | 0.020 g |
| Magnesium Sulfate | 0.028 g |
| L-Arginine | 0.002 g |
| L-Glutamic Acid | 0.004 g |
| L-Histidine | 0.001 g |
| L- Leucine | 0.004 g |
| L-Isoleucine | 0.002 g |
| L-Lysine | 0.003 g |
| L-Methionine | 0.001 g |
| L- Phenylalanine | 0.003 g |
| L-Threonine | 0.002 g |
| L- Tryptophan | 0.001 g |
| L-Valine | 0.005 g |
| L- Cysteine | 0.001 g |
| Vitamin B1 | 90 mg |
| Vitamin B6 | 18 mg |
| Vitamin B12 | 5.45 mg |
| Vitamin C | 149 mg |
| Niacinamide | 541 mg |
| Biotin | 0.90 mg |
| Excipients q.s | 100 ml |

**SPECIES:**
•Equine

**DOSAGE:**

**DOSAGE**

| SPECIE | AGE | WEIGHT | VOLUME (mL) |
|---|---|---|---|
| EQUINE | Foals | Up to 60 kg | 5 mL |
| | Adults | 350 Kg | 15 mL |

**DURATION OF TREATMENT**
3 to 5 days, according to the veterinarian's judgment

**ROUTE OF ADMINISTRATION**
Intramuscular, subcutaneous, or intravenous.

**INDICATIONS AND USE:**
VALACK B12 is an injectable solution formulated with phosophorycholine, a natural organic phosphorus compound with a regulatory action on basal metabolism. Its formula also contains vitamins, essential amino acids, and minerals, which help optimize conditions for reproduction, fertility, nutrition, and growth in animals.

**ROUTE OF ADMINISTRATION:**
•Intramuscular, subcutaneous, or intravenous

**PHARMACOKINETICS:**
**Vitamins b-complex:** The synthesis of B-complex vitamins occurs in the intestines, especially in the large intestine of non-ruminants; therefore, the efficiency of their availability is much lower. Nutrient absorption, except for water, is considerably reduced.
In many cases, vitamins synthesized by intestinal bacteria are not released from the bacterial cell and are excreted in the feces.

**Minerals:** Absorption occurs in ionic form in the small intestine or in the initial segments of the large intestine. In ruminants, absorption through the rumen wall may also occur.
Excretion depends on the animal species and occurs preferentially via feces or urine. For example, ruminants tend to excrete calcium and phosphorus in the feces, whereas monogastric animals primarily excrete them in the urine.

**Amino acids:** Most amino acids are ingested in the form of proteins, and only in this form can they be incorporated into different metabolic pathways. To achieve this, ingested proteins and peptides undergo hydrolytic degradation by proteolytic enzymes (secreted by the stomach, pancreas, and small intestine) in the gastrointestinal tract. After enzymatic action, amino acids are released, absorbed, and transported into the bloodstream, through which they reach the liver, where part of their metabolism occurs before distribution.
Nearly 80% of the protein that reaches the small intestine is digested; the remainder is excreted in the feces.

**MECHANISM OF ACTION:**
**Phosphorylcholine:** It is a precursor of phosphatidylethanolamine and phosphatidylcholine, the main phospholipid components of plasma, cellular membranes, and organelle membranes in mammalian cells. These phospholipids play an essential role in regulating the biochemical and physicochemical properties of these membranes, as well as the activity of many enzymes and enzymatic systems. In addition, they are essential compounds of lipoproteins involved in lipid transport and secretion.

**Dextrose:** It is a sugar added to fluid solutions to supply energy. It is isotonic, and its two main indications are rehydration in hypertonic dehydration (due to sweating or lack of fluid intake) and as an energy source.

**Sodium acetate:** Sodium participates in acid-base balance and the osmotic regulation of body fluids. It plays a role in transmission of nerve impulse transmissions and in the absorption of sugars and amino acids from the digestive tract.

**Calcium chloride:** Calcium is an essential element required for many functions within the body, including the proper function of the nervous and musculoskeletal systems, capillary and cell membrane permeability, and the activation of enzymatic reactions.

**Potassium chloride:** Potassium plays a very important role, together with sodium, chloride, and bicarbonate ions, in the osmotic regulation of body fluids, acid-base balance, nerve and muscle excitability, and carbohydrate metabolism.

**Magnesium sulfate:** Magnesium is the most common enzymatic activator.

**Non-essential amino acids (glutamic acid, cysteine):** These can be synthesized in adequate amounts from simpler precursors. All of them are components of proteins and are therefore physiologically essential for the synthesis of body proteins.
**Essential amino acids (lysine, threonine, methionine, leucine, isoleucine, valine, phenylalanine, histidine, taurine, arginine, and tryptophan):** These are amino acids that the animal cannot synthesize at an adequate rate to achieve optimal performance. To meet physiological needs, they must be supplied in the diet.
The nine amino acids that are generally considered essential for all species of mammals and non-ruminants are lysine, threonine, methionine, leucine, isoleucine, valine, phenylalanine, histidine, and tryptophan. The biosynthesis of these amino acids is essentially zero.
**Arginine** is partially synthesized in mammals, but not a rate sufficient for maximum growth.
For maximum growth of broiler chickens and turkey poults, small amounts of glycine (or serine) and proline must be present in the diet. The biosynthesis of these amino acids does occur, but the amounts synthesized do not meet the total requirements for these amino acids.

**Tyrosine and cysteine** are referred to as semi-essential amino acids, because tyrosine can synthesize in the body from phenylalanine, and cysteine can be synthesized from methionine and serine. Taurine, a non-protein amino acid derived from cysteine is inefficiently synthesized by feline species.

**Vitamin B1:** It is a coenzyme closely associated with the metabolism of carbohydrates, fatty acids, and certain amino acids, as well as with two metabolites in the tricarboxylic acid cycle.
Vitamin B6: In its coenzyme form, it is closely associated with amino acid metabolism.

**Vitamin B12:** The coenzyme forms of vitamin B12 function in several important enzymatic system, such as isomerases, dehydratases, and enzymes involved in the biosynthesis of methionine from homocysteine. In ruminants, vitamin B12 plays a role in the metabolism of propionic acid into succinic acid. In this pathway, the vitamin is necessary for the conversion of methylmalonyl coenzyme A to succinyl coenzyme A.

**Vitamin B3 (Niacinamide):** Vitamin B3 is an important component of the coenzymes NAD and NADP. Its metabolites are found in all cells and are indispensable in the redox reactions that occur during the breakdown of carbohydrates, proteins, and fats, giving them an important role in energy production. It also participates as a signal transducer, regulates the expression of certain genes, and maintains genomic integrity.

**Vitamin B7 (Biotin):** It acts as a cofactor for the enzymatic carboxyltion of four substrates (pyruvate, acetyl-CoA, propionyl-CoA and methylcrotonyl-CoA), making it indispensable in the metablosim of carbohydrates and lipids.

**Vitamin C:** Ascorbic acid is an important water-soluble antioxidant involved in oxidation/reduction reactions in the body. It participates in many processes, including collagen synthesis, the synthesis of epinephrine from tyrosine, and iron absorption.

**PRECAUTION, WARNINGS AND CONTRAINDICATIONS:**
•Do not use in patients with hypersensitivity to any of the components.
•Do not administer in patients with suspected hypervitaminosis
•Use is not recommended in species other than the authorized one.

**DRUG INTERACTIONS:**
Not reported.

**SIDE EFFECTS:**
In real cases, hypersensitivity or allergic reactions may occur.

**WITHDRAWAL:** None .

**ANTIDOTE:** None.

**STORAGE:** Store in a cool and dry place, protected from light at a temperature between 15°C to 30°C. **Keep out of the reach of children and pets.**

**SALE:** Free

Ecuador Reg. Nº: 9B2-2-10998-AGROCALIDAD
Kingdom of Bahrain Distributor in GCC
Arsan for veterinary services
Info@arsan.vet
+973 37773682
Elaborated and distributed by: ***FARBIOPHARMA S.A.***
Address: Guayas Street Nº E3-296 and Pichincha Ave.
Location Lomas de la Concepción, way to Pintag.
**Phone: (593) 2 5240501** - 2794046 - 2794031
+593 99 968 4047 / +593 99 164 6785
CUSTOMER SERVICE: 1800327246
www.farbiopharma.com / Quito - Ecuador

**MADE IN ECUADOR**



FARBIO PHARMA