

Hepacare Solution

For Veterinary Use Only

COMPOSITION:

Each ml contains.

L-Carnitine.....	50mg
Betain as HCl.....	20mg
Choline Chloride.....	100mg
Sorbitol.....	200mg
Magnesium Sulphate.....	10mg
Inositol.....	7mg

INDICATIONS:

Hepacare solution is recommended for the treatment of fatty syndrome, hepatitis, hepato renal dysfunction, metabolic disorders, mycotoxins and toxemia in poultry.

PHARMACOLOGY:

Betain is a small N-trimethylated amino acid, existing in zwitterionic form at neutral pH. Naturally occurring quaternary amine closely related to the amino acid glycine. Its primary function in mammals is within the metabolic cycle of methionine. Catabolism of methionine occurs by transfer of the adenosyl group from ATP to the sulphur group of methionine forming S-adenosylmethionine. Subsequently S-adenosylhomocystein is formed by transfer of the methyl group to an appropriate acceptor such as phosphatidyl ethanolamine. The rationale for developing betain as treatment for homocysteinuria is reasonable. As a hyperosmotic cathartic, Sorbitol produces a hygroscopic action resulting in increased water in the large intestine and increased intraluminal pressure which stimulates catharsis. Magnesium is the second most plentiful of the intracellular fluids. It is essential for the activity of many enzyme systems and plays an important role with regards to neurochemical transmission and muscular excitability. Deficits are accompanied by a variety of structural and functional disturbances. L-Carnitine is a naturally occurring substance required in mammalian energy metabolism. It has been shown to facilitate long-chain fatty acid entry into cellular mitochondria, thereby delivering substrate for oxidation and subsequent energy production. Fatty acids are utilized as an energy substrate in all tissues except the brain. In skeletal and cardiac muscle, fatty acids are the main substrate for energy production. Inositol is an important nutritional compound that regulates cellular functions and enzyme activity. Inositol is considered to be a cofactor. Cofactors are the single most important set of components required to maintain fundamental processes throughout the body. Basic nervous system functions such as neurotransmitter synthesis and healthy cell to cell communication would not be possible without the presence of necessary vitamins, minerals and amino acids cofactors.

Choline chloride is a water soluble essential nutrient. It is usually grouped within the B-complex vitamins. Choline chloride has a choline cation with chloride anion, alternative names are hepacholine, biocolina and lipotril. Generally refers to the various quaternary ammonium salts containing the N,N,N-tri methyl ethanol ammonium cation. These naturally occurring ammonium salts are found in the lipids that make up cell membranes and in the neurotransmitter acetylcholine. It is mass produced and is an important additive in feed especially for chickens where it accelerates growth.

TOXICOLOGY:

The acute toxicity of betain is low. In the mouse, LD50 values of 10,800 mg/kg and 830 mg/kg by the subcutaneous and intravenous route respectively were reported. There was no clear evidence of

toxicity at recommended repeated doses. The observations made clearly indicate that, at equivalent undiluted oral doses, glycerol produced gastrointestinal irritation to a much greater degree than did sorbitol. Excess or lack of magnesium can have an adverse effect on the body. Magnesium sulfate is a salt of magnesium, that is used for the treatment of constipation and heartburn. Consumption of this salt helps in increasing the level of magnesium present in the body. If magnesium rich foods are consumed, the body gets the optimum amount of magnesium required by the body. Excess amount of magnesium in the body can show as magnesium sulfate toxicity symptoms.

No epidemiological studies or case reports investigating exposure to L-carnitine and/or α -lipoic acid and cancer risk. Overdosing of Inositol (1.5-6g per day) often lead to side effects that can include dermatological conditions such as skin flushing and itching, dry skin, skin rashes including acanthosis nigricans. Dietary choline intake was not associated with increased risk of colorectal cancer.

DOSAGE & ADMINISTRATION:

Administer the doses via drinking water.

1ml per 4 liters for 3-5 days in any age of poultry..... cow, cattle, horse and goat.

WITHDRAWAL TIME: Nil

PRECAUTIONS:

Shake well before use.

Store between 15-25°C in a cool and dry place.

Protect from light and heat.

Keep out of the reach of children.

Consult the veterinarian before use.

Innovator's Specs.



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