

# CONVITAL EQUILYTES

*Potassium ions*  
*Magnesium ions*  
*Calcium ions*

## INDICATIONS

Potassium, magnesium and calcium ion, oral electrolyte paste in an amino acid chelate form for the hard working horse

## BENEFITS

- Electrolyte paste for horses
- Fast acting, highly absorbant and bioavailable in minutes
- Palatable due to molasses base
- Special formulation containing potassium, magnesium and calcium ions in an amino acid chelate form
- 3 x 60g presentation ideal for horses in training



## PACKAGING

LIST NO.	UNIT PACKAGE	CASE SIZE
1EQU001	60G	12

See reverse side for Administration and Dosage.



## CONVITAL EQUILYTES

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### ALL NATURAL WITH AMINO ACIDS

Electrolytes are muscle impulse conductors. The electrolytes calcium, potassium and magnesium (Ca<sup>++</sup>, K<sup>+</sup> and Mg<sup>++</sup>) are necessary for the proper function of muscle, both cardiac and skeletal in the horse.

### WHAT HAPPENS WHEN A HORSE WORKS HARD?

During the stringent, prolonged exercise and sweating, that a horse undergoes while racing, large quantities of these ions are lost, resulting in fatigue and exhaustion. During maximum physical stress, your horse can sweat away about 32 pounds of body fluids. He's not just losing water, he's losing the electrolytes essential to smooth, efficient muscle function.

Each muscle used by the horse produces heat and releases potassium into the blood, causing veins and arteries to expand and increase in size to the maximum carrying capacity. The added circulation carries away heat from the muscle to cool them. As water is drawn out of the muscle cells to produce sweat, the cells operate with decreasing efficiency. The horse becomes weak and exhausted from the loss of potassium. The magnesium lost can result in both fatigue and muscle cramps. Calcium is also excreted in the horse's sweat and this loss can cause a metabolic imbalance known as the "thumps" where the diaphragm spasmodically contracts, synchronised with the heartbeat.

### HOW CAN EXHAUSTION BE PREVENTED?

To prevent dehydration, exhaustion and metabolic disorders your horse needs water and electrolytes during and after physical stress, and he needs them in the body tissue where they can act to keep his muscles performing at their peak. Your horse also needs glucose, which is the only carbohydrate that is used for energy, and is a by-product of fructose and glucose metabolism. Glucose is stored by the horse in the form of muscle glycogen, which is depleted as it is used for "fuel" by the working muscles.

### HOW DO THE SUPPLEMENTS WORK?

Attempts to replace these ions by feeding the usual electrolyte salts produce unpredictable results. The chloride salts of potassium, magnesium and calcium when given to the horse in either food or water may not be absorbed into the blood for numerous reasons, including

- Competition between ions for transporting proteins to be carried into intestinal cells. Some competing ions can be antagonistic and prevent absorption.
- Concentration of each ion.
- Solubility of the ions associated molecules.

Because of these, and other variables in electrolyte absorption from the gut, the replacement of the lost

electrolytes by use of the old "salt" forms in the water make absorption and cellular balancing erratic unpredictable, and therefore unreliable.

**The athletic horse, especially during an event or competition needs to have lost electrolytes replaced rapidly and in a predictable manner.**

### WHY IS CONVITAL EQUILYTES DIFFERENT?

Convital Equilytes contains potassium magnesium and calcium ions concentrated in an amino acid "chelate" form to make them highly absorbable and rapidly bioavailable. As a stable amino acid-electrolyte chelate, Equilytes is not ionized in the gut, but absorbed intact through a different pathway. This means that the electrolytes are transported across the gut wall to the blood where they become bioavailable in minutes rather than hours.

Equilytes provides your horse with fructose as an energy source. The amino acid L-glutamine is also contained in Equilytes as a direct and immediate energy source, since it can be used in addition to glucose as a fuel by the brain cells in their very active metabolism. Glutamine passes readily through the blood brain barrier, and is transformed into glutamic acid which is then used as fuel.

### HAS CONVITAL EQUILYTES BEEN TESTED?

In order to obtain clinical data for the use of Electrolytes chelated to amino acids ("convital equilytes") a controlled study was made of the "Horsetooth Mountain Endurance Ride" held in June 1987, near Fort Collins, Colorado under the control of K.A. Larson, DVM Ph.D. This study has shown "test" horses treated with Equilytes maintained significantly higher levels of Ca<sup>++</sup>, Mg<sup>++</sup> and K<sup>+</sup> during race when compared with untreated controls, demonstrating the rapid uptake and bioavailability in the product.

### INGREDIENTS:

Sodium chloride, potassium chloride, chelated calcium, chelated magnesium, Fructose, L-glutamine, and benzoic acid. Calcium and magnesium are chelated to amino acids. Molasses base.

### DOSAGE:

Apply paste directly from syringe to back to tongue. For horses undergoing stress, administer per 1,000 pounds (454kg) of bodyweight, or one-half syringe one hour prior to and one-half syringe immediately following event of workout. Water horse after administering.

