PRODUCT FACT SHEET

How does Lactic Acid affect performance?
During exercise, muscles metabolise glucose (sugar) into energy. Muscles receive glucose continually through the blood, and also have their own stores of sugar (called glycogen). Lactic Acid builds up after the stored glycogen in muscles is used up. As lactic acid builds up in the muscles this leads to fatigue and severe muscle soreness which reduces the effectiveness of muscle activity.
Every animal has an upper limit of exercise ability, called the anaerobic threshold or lactose threshold. The lactate threshold is measurement of how fit the heart and blood vessels are. With regular exercise training, a horse's lactate threshold will increase.
Exercising at an intensity below the lactate threshold produces very little lactic acid and the body quickly clears what is produced. A horse can exercise below the lactate threshold for a long time, even for hours.
Once the intensity of exercise exceeds the lactate threshold, muscles begin to use glucose inefficiently, through alternative chemical reactions. Lactic acid is produced and can rapidly build up in the blood and muscles seriously affecting performance and endurance.

Why Buffit Paste?
Buffit Paste is the most scientifically advanced lactic acid buffer paste available in the world today. The proprietary ingredients potent mode of action is over 400% stronger than any other lactic acid buffer ingredient on the market. Buffit Paste directly extends lactic acid thresholds in horses and racing camels by increasing delivery of blood flow to muscle tissues, the strengthening of blood vessels and the support of tissue regeneration. The increased blood flow leads to an increase in the level oxygen stored in the muscle tissues (myoglobins) and an increase in glycogen levels (stored sugars in muscles). Increased glycogen in muscles extends the lactic acid threshold as lactic acid build up only occurs once the muscle has exhausted all stored glycogen.

Blood flow to the muscle tissues is increased through:
- Enhanced blood micro-circulation – AECS's proprietary ingredient causes vasodilation (widening of the blood vessels) and increased blood flow to tissues in the body that are not receiving enough glucose, lipids or other nutrients.
- Relaxed blood vessels and improved blood flow - stimulates the enzyme 'endothelial nitric oxide synthase' (eNOS) for enhanced generation of Nitric Oxide (key mediator signalling dilation of blood vessels to ensure optimal blood flow to and from muscle tissues) from the precursor molecule L-arginine.

Other key ingredients in Buffit Paste play an integral role in the enhancement of cell nutrition, alertness and immune function.
• Branched-Chain Amino Acid (BCAA) - Essential Aminos of Leucine, Isolecine and Valine that metabolise in the muscle instead of the liver. BCAA stimulates the building of protein in muscle and reduces muscle fibre breakdown which prevents muscle fatigue.
• Electrolytes - Electrolytes help to preserve the correct balance of fluids in cells and are involved in muscle function and the processing of waste. Electrolytes are necessary after exercise to replenish spent minerals and is vital for rehydration.
• L-Glutamine - Plays in integral role in biochemical functions relating to protein synthesis, cellular energy, nitrogen donations for anabolic processes, carbon donation and nontoxic transport of ammonia in blood circulation.
• L-Carnitine - Required for transport of fatty acids during the breakdown of lipids (fats) for the generation of metabolic energy.

Buffit Paste has been double-buffered to be given as a drench with 30mls given orally at one time before competition.

What is Lactic Acid?
Lactic acid is a chemical compound that plays a role in various biochemical processes affecting performance in horses and camels and is used to release energy to the body without the involvement of oxygen - a process called anaerobic glyclysis, Lactic acid operates as a temporary fuel source during intense physical activity.
In performance and competition, L-lactacte is constantly produced from pyruvate (ester of pyruvic acid) via the enzyme lactate dehydrogenase (LDH) in a process call fermentation during normal metabolism and exercise. It does not increase in concentration until the rate of lactate production exceeds the rate of lactate removal, which is governed by a number of factors, including monocarboxylate transporters, concentration and isoform of LDH, and oxidative capacity of tissues.

Is it Legal in Performance Animals?
Buffit Paste is 100% drug and chemical free. It contains no banned substances and does not swab. All users must adhere to the rules of racing that apply in their country or state.

Directions for Use:
Performance Dosage:
Administer 30g orally before competition. All users must follow the rules and regulations of the governing bodies in your country.

Maintenance Dosage:
Administer 10g orally 3 times a week for build-up of lactic acid resistance
Storage:
Buffit Paste should be stored at room temperature. Do not freeze. Do not expose to sunlight.
Sizes & Availability:
Buffit Paste is available for purchase in single 30ml syringes, 3-Packs and 10 Packs