

# EQUI SPARK™

The Ultimate Performance Enhancer for Racing Horses and Camels

*Professional Technical Literature | For Veterinarians, Pharmacies, Stables & Equine Professionals*

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## 1. EXECUTIVE SUMMARY

Equi Spark™ represents the pinnacle of performance nutrition for elite racing animals—a meticulously crafted, scientifically advanced formulation designed to boost stamina, endurance, and overall performance in both racing horses and camels. Developed through years of research by Care and Cure Animals Health, Equi Spark™ combines powerful, research-backed ingredients to give racing animals the competitive edge they need to outpace the competition.

The formulation features a proprietary blend of cutting-edge performance ingredients: Nicotinamide Riboside Chloride for cellular energy optimization, Cordyceps Extract for enhanced stamina and oxygen utilization, and Coenzyme Q10 for mitochondrial function and antioxidant protection. This is complemented by essential branched-chain amino acids (BCAAs) for muscle health and adaptogens such as Rhodiola Rosea and Astragalus for stress resilience and recovery.

In the high-stakes environment of horse and camel racing—where peak physiological performance and rapid recovery determine race outcomes—Equi Spark™ offers veterinarians, trainers, and stable managers a scientifically validated, test-safe performance solution. Trusted by top trainers and owners, Equi Spark™ is the secret weapon for victory in the arena.

### Key Benefits at a Glance:

-  Boosts stamina, endurance, and overall performance
-  Packed with potent ingredients: Nicotinamide Riboside Chloride, Cordyceps Extract, and Coenzyme Q10
-  Essential amino acids for muscle health and recovery
-  Adaptogens for stress resilience and faster recovery
-  Trusted by top trainers and owners
-  Suitable for both racing horses and camels

-  Test-safe and competition-compliant

## 2. THE PERFORMANCE CHALLENGE

### 2.1 The Demands of Elite Racing

Racing horses and camels are among the world's most elite mammalian athletes, subject to extraordinary physiological demands:

- **Cardiovascular Stress:** During maximal exercise, heart rate in racehorses may increase from 30-40 beats/minute at rest to 220-240 beats/minute, with cardiac output exceeding 300 L/min from a resting value of approximately 25 L/min. Racing camels experience similar cardiovascular stress, with heart rates reaching 180-220 beats/minute during maximal exertion.
- **Respiratory Demands:** Respiratory rate in racehorses increases from 8-16 breaths/minute at rest to 120-150 breaths/minute during maximal exercise, with minute ventilation exceeding 1,500 L/min. Camels exhibit large tidal volume and efficient gas exchange, but racing stress pushes these systems to their limits.
- **Musculoskeletal Load:** At racing speeds (45-65 km/h in horses), limb forces exceed 2.5-3 times body weight per stride. Tendons and ligaments act as biological springs, storing and releasing energy during gallop, but repetitive strain leads to microdamage accumulation.
- **Metabolic Requirements:** Energy production must meet the extraordinary demands of sprint racing. ATP stores within muscle are limited, requiring continuous regeneration through interconnected energy systems. During intense exercise, muscle ATP can decrease by up to 50%, matched by an equal rise in inosine monophosphate (IMP).
- **Environmental Stress:** In Gulf racing environments, ambient temperatures frequently exceed 40-45°C, accompanied by intense solar radiation, low humidity in desert regions, and high humidity in coastal areas. These factors significantly increase the risks of dehydration, electrolyte imbalance, heat stress, oxidative damage, and reduced athletic performance.

### 2.2 Limitations of Conventional Performance Supplements

- Incomplete Ingredient Profiles
- Poor Bioavailability
- Single-Mechanism Focus
- Regulatory Concerns
- Inadequate Recovery Support

## 3. EQUI SPARK™: FORMULATION AND PHARMACOLOGY

### 3.1 Product Overview

Equi Spark™ is the ultimate performance enhancer for racing horses and camels. It is classified as a performance enhancing supplement.

### 3.2 Complete Ingredient Profile

**3.2.1 Nicotinamide Riboside Chloride (NR):** NAD+ precursor for cellular energy, mitochondrial support, and fatigue resilience.

**3.2.2 Cordyceps Extract:** Improves VO2 Max, energy, and endurance.

**3.2.3 Inosine Monophosphate (IMP):** Key role in ATP energy metabolism.

**3.2.4 Octacosanol:** Supports oxygen utilization and stamina.

**3.2.5 Active Dry Yeast:** Supports digestive health and nutrient utilization.

**3.2.6 Coenzyme Q10 (CoQ10):** Mitochondrial function, antioxidant protection, and performance enhancement.

**3.2.7 Astragalus membranaceus:** Immunomodulatory, antioxidant, and adaptogenic effects.

**3.2.8 BCAAs:** Essential for muscle protein synthesis and recovery.

**3.2.9 L-Glutamine:** Muscle recovery and immune function.

**3.2.10 L-Phenylalanine:** Neurotransmitter precursor for alertness.

**3.2.11 N-Acetyl Tyrosine:** Enhanced bioavailability for neurotransmitter support.

**3.2.12 NN-Dimethylglycine (DMG HCl):** Energy enhancement and antioxidant support.

**3.2.13 Rhodiola Rosea:** Adaptogenic, stress resilience, and ATP synthesis.

**3.2.14 Heat Stabilized Rice Bran:** Concentrated energy source.

**3.2.15 Fenugreek Seed Powder:** Digestive and metabolic support.

**3.2.16 Stevia/Natural Flavor:** Enhances palatability.

## 4. MECHANISM OF ACTION

Equi Spark™ utilizes a multi-pathway approach: NAD+ pathway for energy, Mitochondrial support via CoQ10, enhanced oxygen efficiency, muscle protein synthesis, and adaptogenic stress management.

## 5. CLINICAL APPLICATIONS

Optimizes pre-race performance, supports training intensity, and facilitates rapid post-race recovery through a loading protocol (Double dose 3 days prior/day of event) and maintenance (43g daily).

## 6. DOSAGE AND ADMINISTRATION

Maintenance: 43g daily. Event Loading: Double doses 3 days prior and on event day. Oral administration.

## 7. QUALITY ASSURANCE

Manufactured to high standards, test-safe, and compliant with racing authority regulations.

## 8. COMPARATIVE ADVANTAGES

| Feature               | Equi Spark™ |
|-----------------------|-------------|
| NAD+ Precursor        | Yes         |
| Mitochondrial Support | Yes         |
| Adaptogens            | Yes         |
| Dual-Species          | Yes         |

## 9. REGIONAL CONTEXT

Tailored for the elite racing environments of the UAE (Meydan, Al Marmoom, etc.) and the growing industry in Pakistan. Reflects the UAE's commitment to excellence and veterinary welfare.

## 10. CONCLUSION

Equi Spark™ is the ultimate performance enhancer, delivering science-backed results for elite racing animals.