



Specialists in Feeding for the Future
— Since 1975 —

Ardmore Equine Nutrition Ltd

Ardmore

Co. Waterford

Ireland

Tel: 024-94134

Fax: 024-94333

Int Tel: +353-24-94134

E-mail: info@ardmoreequine.com

Web-site: www.ardmoreequine.com

TECHNICAL BULLETIN

TRACE GEL

Minerals, both macro and micro are part of the vital tools the professional breeding and racing stables need to aid in maximising their performance results. General mineral levels are met from many of the excellent compound feeds currently available, but every horse, in the many different situations it encounters has its own individual requirements. Pasture and forage qualities can and do vary and a reliable source of minerals, readily bio-available can level out other mineral variations.

TRACE GEL contains a synergistic blend of all the minerals needed for optimum equine health, in the many situations met in professional stables. The correct mineral ratios and levels are shown by the latest research as crucial in not "overloading" the animal as the latter can contribute to Developmental Orthopaedic Disease - **DOD**. i.e.

Flexural deformities – occur when the bone grows faster than the attached tendons or ligaments, which lead to shortening of the flexor tendons and flexion of the joints.

Epiphysitis – an inflammation of the growth plate of long bones.

Osteochondrosis (OCD) – is a disease of the growth plate that disrupts endochondral ossification and results in an area of retained cartilage, with a consequent defect in the bone. Loose fragments of cartilage or bone may be present in the joint space.

This is a key attribute of Trace Gel, its ability to deliver slow sustained mineral release for natural assimilation and is achieved by the inclusion of our exclusive "**F-C-R Premix**". One of the mechanisms **F-C-R Premix** uses for optimum absorption is through the Villi in the small intestine are where the majority of mineral transfer into the blood stream takes place, by increasing the number and branching of the villi providing more efficient absorption. In the small intestine mineral absorption sites are sometimes dual purpose and competitive. Iron and Manganese are such a duality. Too high an Iron content in a diet and Manganese absorption can be reduced possibly compromising bone growth and integrity and cartilage metabolism, it being part of chondroitin sulphate. Other similar relationships exist.

Recent research is starting to show that a probable link between excess iron and **insulin resistance (IR)** i.e. iron overload in horses. **Laminitis** can accompany insulin resistance and can often occur before it is diagnosed by radiographic testing.

TRACE GEL is an excellent mineral product (based around highly bio-available Chelated minerals) and contains a number of our exclusive "extras" that make the difference to other mineral products. Regular usage of provides the correct levels of minerals when required and without overload.

P.J. Bolton

P.J. Bolton B.Sc.(Chem), B.Sc.(Biochem), ARIC, MBHMA, AIIM.

Head of R & D for Ardmore Equine Nutrition Ltd

December 2014

Directors: Liam Gleeson M.I.P.A.V. Kieran Gleeson.

Members of A.H.D.A. & B.E.T.A. Registered in Ireland No. 376888

In House Consultants and Technical Support in: Veterinary Medicine, Human & Animal Nutrition, Phyto-biology, Bio-chemistry & Phyto-chemistry.



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PRODUCT ANALYSIS DATA

Product name: **TRACE GEL**

Minerals and the inter-relationships between the different ones and other nutrients is a constantly evolving science as they may enhance one another or be antagonistic. This is shown by the detrimental combination of Sulphur, Molybdenum and Copper. The Copper is required for many bodily functions including catalysing the Iron onto the haemoglobin molecule to carry oxygen in the blood. Sulphur and Molybdenum work together against the Copper to produce a "Thiomolybdate" ion that makes the Copper soluble and allows it to be excreted before it can be used by the body.

This potential problem and others are addressed in this Product's formulation allowing optimum mineral availability for vital metabolic functions.

Analysis:

F-C-R Premix	9,500mg/Kg
Copper Glycinate	7,500mg/Kg
Zinc Glycinate	8,100mg/Kg
Magnesium Glycinate	8,000mg/Kg
Potassium Glycinate	8,000mg/Kg
Manganese Glycinate	3,000mg/Kg
Iron Glycinate	4,220mg/Kg
Selenium as Selenite	75mg/Kg
Vitamin E (as dl - α -tocopherol)	12,000ius/Kg
Vitamin B ₁₂	24,000mcg/Kg

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TECHNICAL DATA

Product name:	"TRACE GEL"
Product Function:	An essential multi-mineral complex with associated vitamins and F-C-R Premix, suitable for all ages and conditions of horses in professional racing & breeding environments
Form:	Paste in a syringe.
Composition:	"Glycinated" micro-minerals plus essential "macro" ones combined with a broad spectrum of high quality manufactured vitamins and other components. Basal components consist of manufactured emulsifying agents, surfactants, humectants and preservatives. All ingredients approved under current relevant EU legislation.
Material quality:	Food/medical grade
Quality Assurance:	The Product has a range of testing procedures conducted during manufacture to ensure both the physical and chemical parameters are correct. Post manufacture the product is subjected to extensive microbiological (U.K.A.S. accredited) testing for a wide range of potential equine pathogens. Testing for Banned Substances to BHA and Jockey Club requirements are conducted (as all "Ardmore" products are). When all testing parameters have been met the Product is deemed to be "fit for Sale" and released. No irradiation procedures are conducted on this product because all ingredients are non-natural derived

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