

Inorganic & Organic Minerals

Organic compounds, by definition, are those that are bonded to carbon atoms. For example, glucose is a sugar made up of carbon, hydrogen and oxygen atoms. When the atoms combine together they form a compound. The chemical formula for glucose is C₆ H₁₂ O₆. Six carbon atoms combine with twelve hydrogen atoms and six oxygen atoms to form a molecule of glucose.

Inorganic compounds are not bonded to carbon atoms. For example, two hydrogen atoms and one oxygen atom combine to form a water molecule H₂O. Water is therefore an inorganic compound. Carbon on its own is an inorganic mineral. Minerals dissolved in water are also inorganic ie. sodium and chloride in sea water.

Organic sources of minerals are typically derived from plants. A plant takes up minerals from the soil through the root system, they are then combined with water and pushed through the plant for the plant to use in its photosynthetic and metabolic processes. When the plant is eaten by a horse it ingests the minerals that the plant has taken up.

Inorganic sources of minerals are from eating dirt attached to plant material and also drinking from natural water courses with dissolved rock material.

The horse evolved to be able to absorb minerals from both plant and water sources.

In today's modern environment the minerals in plant material are often depleted due to poor soil fertility and modern farming practices. Minerals available from drinking water vary depending upon the source of water. Creek or stream water will have different mineral levels compared to dam or tank water.

Organic and inorganic minerals can also be manufactured by industry to help alleviate the mineral deficient diets of most horses. Chelated minerals are those that have been manufactured to attach a mineral to an organic compound. It is a more expensive process to chelate minerals and adds to the cost of mineral supplementation.

Research indicates it makes no difference to the body whether minerals are organic or inorganic when ingested. The horse's body knows instinctively what mineral is available in the diet and what to do with it regardless of its source. When a mineral deficient diet is supplemented with inorganic minerals there is a noticeable improvement in the health and appearance of the horse eating the supplemented diet. The body does not necessarily need its minerals bonded to carbon to be effective and utilisable.

Equilibrium and LexveT products provide minerals in their elemental form to aid easier and faster digestion by the horse. Digestion and absorption for both organic and inorganic minerals is also dependent upon adequate digestive secretions in the gastrointestinal tract and time of transit of the food ingested. Horses eating a high roughage diet and with ingesta constantly moving through the gut will be far more efficient at absorbing valuable minerals than horses fed high energy and low roughage diets with periods of little ingesta moving through the gut. The Equilibrium and LexveT feeding programme is designed to enhance the digestion and absorption of minerals which are lacking in most diets fed without supplementation.

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