

SICO TRACE ELEMENTS

TRACE ELEMENTS

The human or animal body contains some chemical elements which are present in very low concentrations. These are called trace elements. Many of these trace elements are indispensable because they are components of important substances such as hormones, enzymes and other active proteins. They are thus essential dietary factors. Characteristic deficiency symptoms develop if these trace elements are in short supply. Other trace elements may not be necessary for life but are widely distributed in the air, soil and drinking water and are therefore regularly ingested. It has been definitely proved that iron, copper, cobalt, manganese, zinc, iodine, molybdenum and selenium are essential for life. This is probably also true for fluorine and chromium but too little is known about their metabolic functions to be absolutely sure. It is important to know which of these trace elements are likely to need supplementation. Some are present in foodstuffs at levels adequate to meet animal requirements but others are in short supply and must be added to the diet. It is known that almost all species of domestic animal need supplements of iron, copper, cobalt, manganese, zinc, selenium and iodine whatever diet they are given, although the dose required varies from species to species. Other trace elements such as fluorine, molybdenum and chromium only have to be added to the diet of certain species under special conditions. Trace elements are added to compound feeds in the form of salts or oxides in very low amounts sufficient to meet requirements at all ages and during all phases of production. Deficiency symptoms are thus avoided and optimum results obtained from compound feeds. SICO offers a whole range of these trace elements:

IRON (Fe)

Function

Animals contain about 60-70 mg of iron per kg body weight. Iron is a constituent of the red pigments haemoglobin and myoglobin which are involved in oxygen transfer in blood and muscles. Iron also participates in various metabolic processes

Deficiency

Iron deficiency results in anaemia, loss of appetite, changes in skin and hair and growth disturbances.

Products

IRON OXIDE 67 % FE

FERROUS CARBONATE 31% & 41 % FE

FERROUS SULPHATE:

- FERROUS SULPHATE MONOHYDRATE 30 % FE
- FERROUS SULPHATE PENTAHYDRATE 24 % FE
- FERROUS SULPHATE HEPTAHYDRATE 20 % FE

COPPER (Cu)

Function

The animal body contains some 2 mg of copper per kg body weight. Together with iron, copper is also involved in the formation of haemoglobin and myoglobin. Various enzymes contain copper and it is also important in bone growth and pigment production.

Deficiency

Copper deficiency leads to growth disturbances, impaired skeletal development, nervous system disorders, reproductive problems, anaemia and reduced protein synthesis.

Products

COPPER CARBONATE

COPPER OXIDE 77 % CU

COPPER SULPHATE PENTAHYDRATE 25 % CU

COBALT (Co)

Function

Cobalt is needed for the formation of haemoglobin and myoglobin and is a constituent of vitamin B12 and various enzymes.

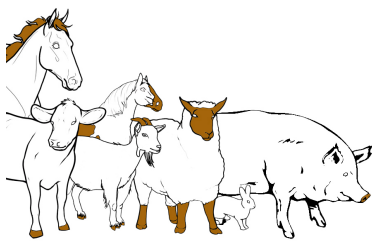
Deficiency

Cobalt deficiency is characterised by anaemia, disturbed growth (particularly in ruminants) and loss of appetite.

Products

COBALT CARBONATE 46 %

COBALT CHLORIDE 25 %



**PRODUCT INFO
& DATASHEET**

COBALT CHROME 24 %
COBALT OXIDE
COBALT PHOSPHATE 21 & 33 % CO
COBALT SULPHATE 21 & 33 % CO

MANGANESE (Mn)

Function

Manganese is present in animals at a level of about 0.2 - 0.3 mg per kg bodyweight. It is important for the activation of various enzyme systems and is involved in skeletal development.

Deficiency

Leads to abnormal functioning of the sexual organs.

Products

MANGANESE CARBONATE 44 % MN
MANGANESE DIOXIDE 83 % & 92 % MnO₂
MANGANOUS OXIDE 62 % MN
MANGANESE SULPHATE MONOHYDRATE 32 %
MANGANESE SULPHATE HEPTAHYDRATE 53 %

ZINC (Zn)

Function

The animal body contains approximately 20-30 mg of zinc per kg. Zinc is found in various enzymes and in the hormone insulin. It is bound to protein for the most part in body tissues and fluids.

Deficiency

Animals fed diets deficient in zinc also show growth disturbances and reduced feed intake. Skin and epithelial damage may also be observed.

Products

ZINC CARBONATE 54 % ZN
ZINC OXIDE 72-80 % ZN
ZINC SULPHATE MONOHYDRATE 35 % ZN
ZINC SULPHATE HEPTAHYDRATE 22 % ZN

IODINE (I)

Function

Iodine is present in animals at a level of 0.3-0.4 mg per kg bodyweight. Iodine is a constituent of the thyroid hormone thyroxine.

Deficiency

Iodine deficiency results in malfunction of the thyroid gland (goitre).

Products

CALCIUM IODATE - 62 % I
EDDI 80 %
POTASSIUM IODIDE 67 %
POTASSIUM IODATE 58 % I

MOLYBDENUM (Mo)

Function

The animal body contains only minute quantities of molybdenum (ca. 1.5 mg/kg). Various enzymes contain molybdenum.

Deficiency

Molybdenum deficiency leads to anaemia, metabolic disturbances and symptoms of paralysis.

Products

SODIUM MOLYBDATE 36 % MO

SELENIUM (Se)

Function

Selenium is a constituent of an important enzyme which, together with vitamin E, protects cells from oxidation.

Deficiency

Certain forms of disturbed growth and of muscle, liver and pancreas degeneration can be corrected by selenium supplementation.

Products

SODIUM SELENITE 45 % SE
SODIUM SELENITE MIXTURE 1% SE

Any information in this publication is believed to be accurate and is given in good faith, but is for the customer to satisfy himself of the suitability for his own particular purpose.
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EVERY TIME THE *right* SOLUTION