The metabolism of dairy cows must preserve a delicate balance to meet requirements for energy, glucose and amino-acids necessary to support milk production, reproductive efficiency and animal well-being.

During the transition period, as a consequence of the energy deficit, various diseases or nutritional errors, this balance is often altered, resulting in postpartum health problems, compromised lactation performance and reduced profitability.

Metabolase, thanks to the combined action of its unique components, restores the metabolic balance, favours detoxification and fights oxidative stress, thus quickly making cows healthy and productive once again.

Metabolase

ACTIVE SUBSTANCES

L-CARNITINE
An essential element for carrying fatty acids into the mitochondria, where they are burned and used as a source of energy. It activates the lipid metabolism, reduces the formation of ketone bodies and prevents fat infiltration of the liver.

LIPOIC / THIOCTIC ACID
A metabolic antioxidant, extremely active against oxidative stress. It is the only one able to act both in aqueous and lipidic phase, chelate metals and restore supplies of vitamin E, vitamin C and reduced glutathione. It also plays a key role in the metabolism of fats.

ORNITHINE - CITRULLINE - ARGININE
Favour the hepatic synthesis of urea and reduce the toxic effects of ammonia.

ASPARTATE - GLUTAMATE
Fundamental for extrahepatic ammonia detoxification.

METHIONINE
Stimulates hepatic synthesis and detoxification.

L-LYSINE
A fundamental amino-acid working in various metabolic processes, including biosynthesis of carnitine.

GLYCINE
A cell-protecting antioxidant amino-acid.

VITAMIN B12
It activates metabolism, stimulates food intake, favours the transformation of propionic acid into glucose. It works in the synthesis of VLDL's, indispensable to avoid hepatic lipid accumulations.

VITAMIN B6
Necessary for gluconeogenesis and for the functioning of many vital enzymes.

FRUCTOSE
A ready-to-use energy source.

SORBITOL
Long-lasting energy source.

Metabolase

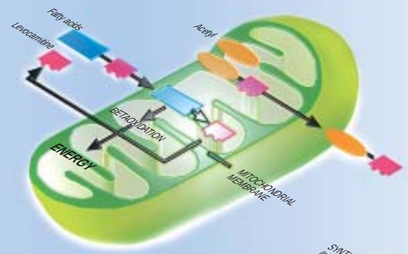
A number of conditions can alter the metabolic balance and detoxification processes

M e t a b o l a s e

t h e s o l u t i o n i n t h i s s o l u t i o n

ENERGY DEFICITS
In periods of intense production and negative energy balance, an excessive mobilisation of fatty acids from adipose tissue takes place, resulting in ketosis and fatty liver.

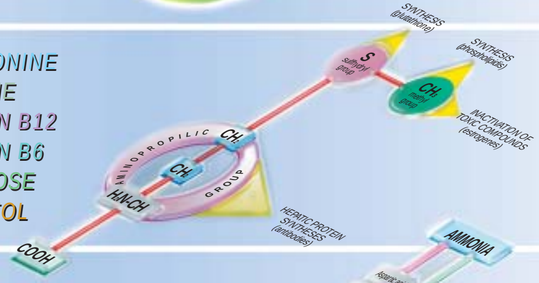
L-CARNITINE
FRUCTOSE
SORBITOL
L-LYSINE
VITAMIN B 12
VITAMIN B6



antiketogenic, antisteatosic and gluconeogenic activity

ALTERATIONS OF HEPATIC FUNCTION
Metabolic disorders, intoxications and various diseases can alter hepatic performances and endanger the processes of synthesis and detoxification.

METHIONINE
L-LYSINE
VITAMIN B12
VITAMIN B6
FRUCTOSE
SORBITOL

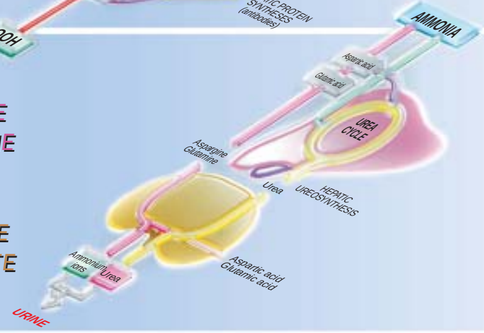


improvement of liver function and detoxification processes

AMMONIA INTOXICATION
Hepatic lesions (steatosis, intoxications), as well as dietary imbalance or alterations in the digestion processes, result in an increase of blood ammonia concentration with serious repercussions on the vital functions of the organism.

ORNITHINE
CITRULLINE
ARGININE

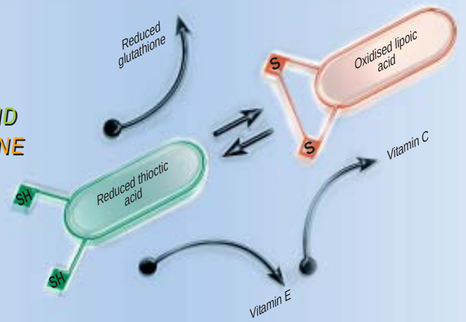
ASPARTATE
GLUTAMATE



ammonia detoxification

OXIDATIVE STRESS
The organism of a milking cow undergoes big productive efforts, which invariably result in the formation of extremely dangerous free radicals.
Free radicals reduce immune defences, increase the incidence of mastitis and worsen the reproductive efficiency.

LIPOIC ACID
L-CARNITINE
GLYCINE



anti-oxidative action

Metabolase

No withdrawal time

INDICATIONS

METABOLASE is indicated in all toxic and metabolic disorders, in conditions of reduced hepatic functionality, in animals facing heavy and protracted physical stimulus and for fresh cow medicine programs.

- *Ketosis and acidosis*
- *Fatty liver*
- *Alterations in milk quality or quantity*
- *Pregnancy toxaemia*
- *Hepatopathies*
- *Endogenous intoxications (digestive disorders, mastitis, placental retention)*
- *Food intoxications*
- *Anorexia, dysorexia*
- *Convalescence, postoperative course*
- *Dietary imbalance and deficiencies*
- *Parasitosis*
- *Poor performance*
- *Physical fatigue and debilitation*
- *Stress management*

ADMINISTRATION AND DOSAGE

Cattle, adult horses and adults swine
250-500 ml twice daily by intravenous, subcutaneous or intraperitoneal route.

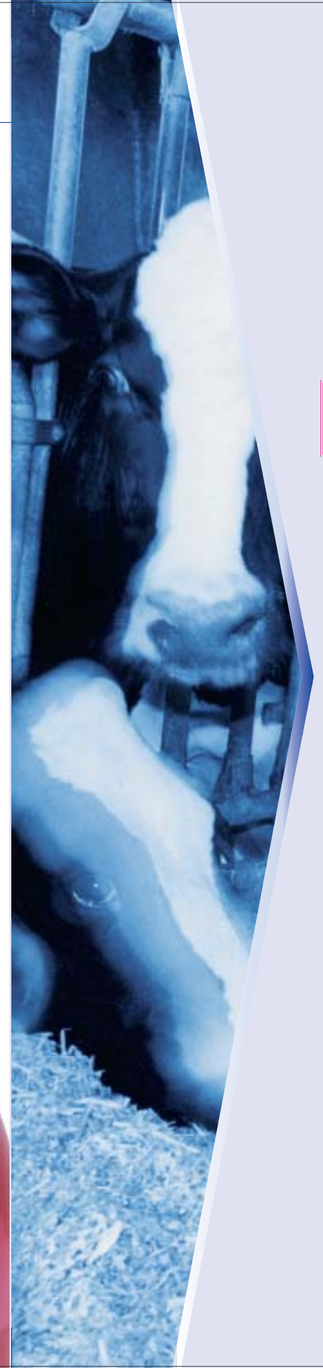
Calves, buffalo calves, foals and other sheep and goats
250 ml twice daily by intravenous, subcutaneous or intraperitoneal route.

Piglets and fattening pigs
20-40 ml/10 kg b.w. twice daily by subcutaneous route.

Lambs and goat kid
20-40 ml/10 kg b.w. twice daily by intravenous, subcutaneous or intraperitoneal route.

Rabbits and cats
2-4 ml/kg b.w. twice daily by subcutaneous route at various injections sites.

Dogs
2-4 ml/kg b.w. twice daily by intravenous or subcutaneous route.



Metabolase

COMPOSITION - Each ml contains: L-Carnitine hydrochloride 6.133 mg (equivalent to L-Carnitine 5 mg) - Thioctic acid 0.2 mg - Pyridoxine hydrochloride 0.15 mg - Cyanocobalamin 0.03 mg - D,L-Acetylmethionine 20 mg - L-Arginine 2.4 mg - L-Ornithine hydrochloride 1.532 mg (equivalent to L-Ornithine 1.2 mg) - L-Citrulline 1.2 mg - L-Lysine hydrochloride 0.625 mg (equivalent to L-Lysine 0.5 mg) - Glycine 1.5 mg - Aspartic acid 1.5 mg - Glutamic acid 1.5 mg - Fructose 50 mg - Sorbitol 80 mg - Excipients q.s. to 1 ml.

WITHDRAWAL - Nil.

STORAGE - Store at room temperature, away from light and heat sources.

www.metabolase.com

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10/04 FOR VETERINARIANS

Metabolase

the solution in this solution

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