

## Antilax Bacto Ferm LauriBiotic

Protection from harmful  
gut bacteria



## Antilax OligoLyt

Oligosaccharide-Energy-Booster  
for rehydration



## Antilax OligoLyt Comfort

Oligosaccharide-Energy-Booster  
for rehydration in a convenient  
dissolvable gelatin sachet

# VeyFo® Antilax Bacto Ferm LauriBiotic



Conception/essential components for the nutritional purposes:

Dried powder formulation containing Veyx premix "LauriBiotic", energy/dietetic nutrient providers, electrolytes, amino acids, vitamin E and minerals

## Product characteristics

The product has been formulated as a premium complementary feed with thoroughly chosen high quality components meeting the requirements for the particular nutritional purposes

Stabilisation of physiological digestion

Stabilisation of water and electrolyte balance to support the physiological digestion

according to the "list of intended uses of animal feedingstuffs for particular nutritional purposes".

Significance and the biological functions of the individual components contained in the product can be summarised as follows based on the available literature and practical experiences:

Finely coordinated components such as energy and diet nutrient sources, electrolytes, amino acids, vitamin E, minerals, aromas (vanillin, fennel, camomile) and LauriBiotic support each other in their regulating effect during digestive disorders (diarrhoea).

LauriBiotic with its main components mono-lauric acid, *Enterococcus faecium* and bentonite ensures an orderly and precise function of the gut's physiological protective mechanisms.

**Lauric acid** is a component of the medium-chain triglycerides, also known as MCT (medium-chain triglycerides) or MCFA (medium-chain fatty acids). Its name is derived from the Latin name *Laurus nobilis* that stands for laurel. Research on lauric acid and its characteristics has been conducted since the 1960s. Its antimicrobial effect has been scientifically confirmed. The medium-chain fatty acids, for instance, are able to defeat viruses by breaking up their outer membrane of lipids and consequently destroying them. The inside is released and the virus dies by virtually dissolving itself. This specific effect against viruses, microbes, (yeast-) fungi, bacteria and others is what makes lauric acid so valuable. It is important to know that the monoglycerides are effective, i.e. the monolaurin.

**Enterococcus faecium (Cernelle 68)** is a probiotic that plays the most important role in animal nutrition. According to the current state of knowledge the special feature is mainly based on the development of its metabolic activity in the gut as well as on the release of antimicrobial substances and the formation of an organic film for the protection of the intestinal mucosa. Additional mechanisms of action are:

- Formation of inhibiting substances such as short-chain fatty acids (pH reduction) as well as of other substances with a selective advantage against other microorganisms without suppressing the desired intestinal flora
- Suppression or inhibition of the adhesion of potential pathogens to the intestinal mucosa
- Suppression of the formation of microbial toxins
- Stimulation of the local immune system in the gut
- Interference on the physico-chemical conditions in the intestine, e.g. pH value and redox potential, thus restricting the conditions for growth of undesirable germs
- Influencing the decomposition of bile acid thus supporting the absorption of fat
- Influencing the intestinal epithelium
- Improving the absorption capacity

**Bentonite** is a clay mineral that usually forms from weathering of volcanic ash. The material has a geologically caused and – dependent on the content of Montmorillonite – extremely large and negatively charged surface with extraordinarily high absorption capacities, especially for harmful earthy minerals. With its extraordinarily high absorption potential it ensures reliable removal of such harmful substances from the intestine while providing an extraordinarily large area for the population of beneficial bacteria. Bentonite promotes the functions of the intestinal flora and is thus stabilising normal physiological digestion.

Dietetically significant aims such as

- Compensating pre-existing fluid and electrolyte losses as well as those that occur during the course of the illness
- Correction of the acid-base balance disorder through sodium bicarbonate and sodium diacetate
- Provision of easily digested energy sources
- Protection of the gut mucous membrane against the ingress of microorganisms and the absorption of toxins through mucilage
- Promoting the development of friendly gut bacteria

are achieved through feeding of VeyFo® Antilax Bacto Ferm LauriBiotic.

## Recommendations for use and dosage

100 g VeyFo® Antilax Bacto Ferm LauriBiotic are dissolved in 1 litre of lukewarm water. In specific cases the amount administered is dependent on the live weight and the age of the animal as well as the extent of dehydration and can be recommended as follows:

### Calves:

A daily intake of 2 to 3 litres of the ready-to-use solution is desirable. In addition, milk should be offered until satiety. If possible, the total quantity of the solution and milk or milk replacer administered should be spread over three daily feeds.

### Foals, piglets, lambs and goat kids:

Normal feeding using dam's milk is to be maintained. The ready-to-use solution is to be offered until satiety at least 3 times daily between each suckling period.

By giving the product to animals that are still taking in sufficient drinking water at an early stage of scouring, time-consuming and stressful infusion therapy can be avoided in most cases.

VeyFo® Antilax Bacto Ferm LauriBiotic can also be used as a preventive diarrhoea treatment (e.g. when moving into new finishing housing or during and after long periods of transport).

It is recommended that advice from a veterinarian be sought before use and before extending the period of use.

## Package size

5 kg bucket



# VeyFo® Antilax OligoLyt/OligoLyt Comfort



## Conception/essential components for the nutritional purposes:

Oligosaccharides (maltodextrin, maltose/maltotriose), sodium bicarbonate, glycine, dextrose, sodium chloride, potassium chloride

## Product characteristics

The product has been formulated as a complementary feed meeting the requirements for the particular nutritional purpose

### **Stabilisation of water and electrolyte balance to support the physiological digestion**

according to the "list of intended uses of animal feedingstuffs for particular nutritional purposes". It contains finely coordinated components such as energy and diet nutrient sources as well as electrolytes that support each other in their regulating effect during digestive disorders (diarrhoea).

In case of risk of, during periods of, or recovery from digestive disturbance (diarrhoea) of any kind for calves of all ages and for other young animals.

In addition to the well-established 1 kg can, the product is newly offered in a convenient 40 g gelatin sachet which dissolves.

## Physiological significance and biological functions

With Antilax OligoLyt/OligoLyt Comfort, Veyx provides an innovative rehydration powder for calves and other young animals.

A plurality of products with oligosaccharides are on the market. However, most of them contain fructo-, galacto- or mannan-oligosaccharides that have no energy benefits. They are all recommended for use as prebiotics to improve the intestinal flora as well as for other health applications.

VeyFo® Antilax OligoLyt/OligoLyt Comfort, by contrast, contains a mixture of maltodextrin-, maltose-, maltotriose-oligosaccharides exclusively suited to the provision of energy. Maltose is a disaccharide, whereas maltotriose is a trisaccharide. Maltodextrin, in turn, is a compound of monomers, dimers, oligomers and polymers. These oligosaccharides have a low osmotic activity. The ready-to-use solution is slightly hypotonic.

Owing to the combination of these highly caloric oligosaccharides, VeyFo® Antilax OligoLyt/OligoLyt Comfort has a very high energy density which approximately meets the increased demand in nutrients and the catabolic metabolism of calves suffering from diarrhoea. This is a great advantage compared to conventional dietetic solutions which contain solely glucose as energy sources. Oral rehydration solutions have limited possibilities to achieve an energetic enhancement by means of glucose only, since glucose increases the osmotic concentration of the solution. If due to an oral intake of an electrolyte solution the osmolarity of the intestinal contents is higher than that of the blood, fluid will diffuse from the blood into the intestinal tract. In this case, the fluid loss and thus diarrhoea would be unintentionally intensified. The oligosaccharides contained in the product are decomposed by enzymes and absorbed as glucose.

## ORT = Oral Rehydration Therapy

### Lifesaving therapy for young animals with immediate effect against dehydration: hydration through the mouth

Hydration through the mouth, also known as Oral Rehydration Therapy (ORT), is a simple, cheap and easily applicable measure against a serious problem – dehydration in the wake of diarrhoea. Its main idea is that a patient is induced to drink electrolytes thus compensating the loss of fluid and of essential ions. VeyFo® Antilax OligoLyt/OligoLyt Comfort is an advancement composed of new ingredients – an innovative product that seems to offer more advantages than previously used solutions. Its ingredients are based on studies of the World Health Organisation (WHO) that has been fighting to prevent that more than 4 million of children under the age of five die from diarrhoea annually since the 1970s. Treatment with modern ORT solutions saves the lives of about one million of children every year. Decisive in this therapy is, on the one hand, the high osmotic pressure (370 mOsmol/l) in the simple electrolyte and sugar solutions. On the other hand, it does not use glucose to provide energy, but particularly formulated oligosaccharides which in a dissolved state have a much more favourable pressure of 280 mOsmol/l.

By means of membrane-bound enzymes, the gut cells break down glucose molecules from the oligosaccharides. These molecules are then transported to the gut cells through the blood circuit. Subsequently, the water molecules and the ions are transported from the intestinal tract into the blood vessels at a higher osmotic pressure of 330 mOsmol/l. In this manner, they are not excreted with the faeces and the duration of the diarrhoea is extremely shortened. Thus, time is gained for a targeted therapy against the pathogens. The impaired gut cells can recover sooner.

## The significance of osmosis during fluid replacement

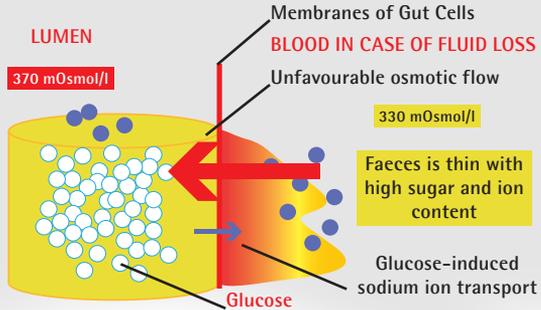
**Osmosis:** If two solutions are separated by a water-permeable membrane, the water starts moving to the solution of lesser into the solution of higher solute concentration until the concentrations are equalised.

This process occurs between intestinal tract and blood circuit, the intestinal mucosa thereby acting as a permeable membrane.

### 1.) Oral Rehydratoin Solution with high glucose:

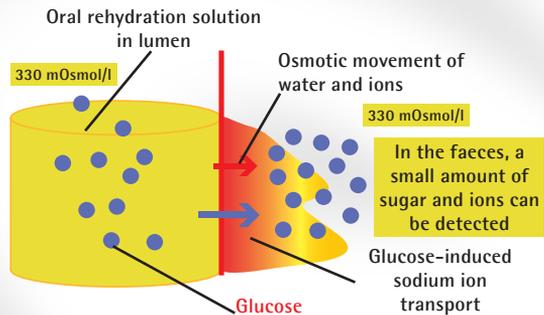
**Osmolarity is higher than that of blood**

Effect: The solution is useless as fluid compensation because the blood loses more water and ions by osmosis. The risk of dehydration is increased, and especially in young animals, it has a fatal outcome.



### 2.) Standard oral rehydration solution: the osmosis (the concentration of dissolved molecule) corresponds to blood's normal osmolarity (330 mOsmol/l)

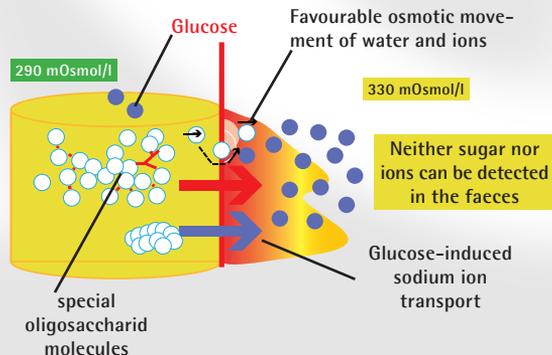
Effect: Inbalance between glucose and vital blood flow. The rehydration solution replaces the missing water, sodium and other ions from the blood, however, the duration of diarrhoea is not shortened.



### 3.) In VeyFo® Antilax OligoLyt/OligoLyt Comfort, the largest portion of glucose is replaced by a special oligosaccharide:

Operation: By means of membrane-bound enzymes, the gut cells break down glucose molecules from the oligosaccharides. These molecules are then transported to the gut cells through the blood circuit.

Effect: The solution is perfect for liquid replacement because water and ions travel towards the blood. Thus, fewer water and ions get lost in the faeces, so the liquid and ion replacement (rehydration) and the treatment of diarrhoea is successful; the duration of diarrhoea is shortened.



Apart from oligosaccharides, the ready-to-use solution contains water, particular electrolytes (sodium, chloride and potassium ions), buffer substances (sodium bicarbonate) as well as glucose and glycine (amino acid) according to the WHO recommendations. The combination of glucose and glycine with sodium ions takes account of the modified absorption conditions of the gut in case of diarrhoea. Glucose and glycine improve absorption of the sodium ions and thus inevitably increase the intake of water from the gut lumen into the vessel system. In addition, the glucose which is absorbed from the gut induces the body to generate and release more insulin which, in turn, increases transport of potassium from outside the cells into the cells. Moreover, glucose is an easily available energy source for the ill organism. The inclusion of sodium bicarbonate will counteract metabolic acidosis.

### Feeding regime/nutritionally significant aims

Powder to prepare a ready-to-use solution containing highly effective providers for electrolyte and dietetic nutrients. For a reliable rehydration, correction of an acid base balance disorder through sodium bicarbonate and a provision with easily digested energy sources in case of either infectious digestive disorders or digestive disorders caused by dietetic or osmotic stress, inappropriate feeding or long-term oral antibiotic treatments. The rehydration solution should be fed to calves of all ages and to other young animals (in particularly to animals that are severely dehydrated but still capable of taking in liquid by themselves) according to the following scheme:

## Recommendations for use and dosage

**VeyFo® Antilax OligoLyt:** Dissolve 40 g powder (1 heaped measuring spoon) in warm milk/milk replacer at 40 °C or, for giving between the meals, in 1-2 litres of warm water at 40 °C.

**VeyFo® Antilax OligoLyt Comfort:** Dissolve 1 sachet of 40 g in warm milk/milk replacer at 40 °C or, for giving between the meals, in 1-2 litres of warm water at 40 °C.

Calves
Dissolve 40 g or 1 sachet in water/milk/milk replacer twice daily; in addition, offer once (better twice) 40 g or 1 sachet per meal between the meals.
Particularly in large or severely dehydrated calves, smaller portions can be given between the meals several times a day without any problem.
Foals, piglets, lambs and goat kids
The ready-to-use-solution (40 g powder or 1 sachet per meal) should at least be given twice daily for 2 days with the milk feeding. Normal feeding using dam's milk is to be maintained. The ready-to-use-solution is to be offered until satiety at least 3 times daily between each suckling period.

## Package sizes

**VeyFo Antilax OligoLyt**

1 kg can with dosage aid (1 heaped measuring spoon = 40 g)

**VeyFo Antilax OligoLyt Comfort**

Package with 12 gelatin sachets of 40 g

Teat bucket with 60 gelatin sachets of 40 g



Constituents*	VeyFo® Antilax Bacto Ferm LauriBiotic	VeyFo® Antilax OligoLyt/OligoLyt Comfort
<b>Energy sources composing of:</b>	<b>40.00 %</b>	
Oligosaccharides (Maltodextrin, Maltose/Maltotriose)	-	58,000 mg/kg
Glucose	x	x
<b>Dietary nutrient suppliers</b>	<b>23.60 %</b>	
Banana meal, fine oat meal	x	-
Bentonite	x	-
Locust bean gum, guar gum	x	-
Soya-glycine, maize	x	-
<b>Gut stabilisers</b>		
„Bactoferm“ LauriBiotic Enterococcus faecium	1.04 x 10 <sup>9</sup> /kg CFU	-
<b>Elektrolytes/Buffer substances comprising of:</b>	<b>18.50 %</b>	
Calcium chloride dihydrate	7,000 mg/kg	-
Potassium chloride	7,000 mg/kg	x
Potassium citrate	5,000 mg/kg	-
Potassium sorbate	1,300 mg/kg	-
Magnesium chloride	12,000 mg/kg	-
Sodium bicarbonate	-	x
Sodium chloride	100,000 mg/kg	x
Sodium diacetate	10,000 mg/kg	-
Sodium hydrogen carbonate	44,000 mg/kg	-
<b>Minerals/Trace elements</b>		
Iron	600 mg/kg	-
<b>Amino acids and Vitamins</b>		
DL-Methionine	7,800 mg/kg	-
Glycine	40,000 mg/kg	x
L-Lysine HCl	8,100 mg/kg	-
Vitamin E	145 mg/kg	-
<b>Preservation / Aromas</b>		
Fennel flavouring	x	-
Potassium sorbate	x	-
Vanillin	x	-

\* Note: The information given is to be understood as a general survey and is subject to alterations, especially if these do not affect the intended nutritional purpose. The latest version of the labelling of the product/packaging is always valid.

## High performance animals require optimised feeding regimes.

We want you to be successful and do our utmost to achieve this target. All constituents contained in the present formulation are well known in animal nutrition. They are also used as nutritional supplements as well as for parenteral nutrition in humans. Their quality and processing meet the highest purity criteria. We produce our product sterile thus achieving a long shelf-life as well as a trouble-free application of the same.

## Additional instructions for all products

To be kept out of the reach of children, to be stored at a cool and dry place and kept away from light.

In order to achieve a clear separation from our veterinary medicines and care products, all our feed specialities that are subject to the feedstuff law - as the present ones - are exclusively marketed and labelled under the umbrella brand "VeyFo®". They are no medicinal products and need not to be entered into the stable treatment diary.

The information given in this product brochure corresponds to the state of knowledge upon completion. Please read the package leaflets prior to using the products.



Veyx-Pharma is GMP-, QS- and VLOG- certified.

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