

What exactly are probiotics?

Probiotics are living and reproducible organisms. They are in an active state at the time of feeding. Probiotics include various lactic acid bacteria, such as lactobacilli or enterococci, but also bifidobacteria and yeasts of the genus *Saccharomyces cerevisiae*. LIVING yeast is therefore a probiotic.



Impact studies are missing

Probiotics are frequently used for the prevention and treatment of various diseases, especially gastrointestinal diseases. Even though probiotics have been around for a very long time (over 100 years), the scientific situation regarding their effect has not yet been sufficiently researched and there is a lack of reliable studies in many areas, especially in horses.

Probiotics in horse feeding

One probiotic authorized for horses is the live yeast *Saccharomyces cerevisiae*. After feeding, live yeast cells are still metabolically active in the stomach and small intestine, but presumably die in the posterior sections of the intestine. Their main effect is to consume oxygen, thereby changing the redox potential and creating unfavourable conditions for aerobic bacteria. In this way, probiotic yeasts help anaerobic microorganisms to find better living conditions, which is important for cellulolytic and lactic acid-utilizing bacteria. This is intended to increase nutrient digestibility, especially of rations rich in crude fibre.

However, there are very few studies that have investigated the effect of live yeasts in horses. In addition, the majority of the studies carried out did not find any positive effect on health from the administration of probiotics. In foals, the use of probiotics for diarrhoea even led to a worsening of the symptoms. The effectiveness of probiotics in equine medicine is therefore controversial.

Authorization of probiotics

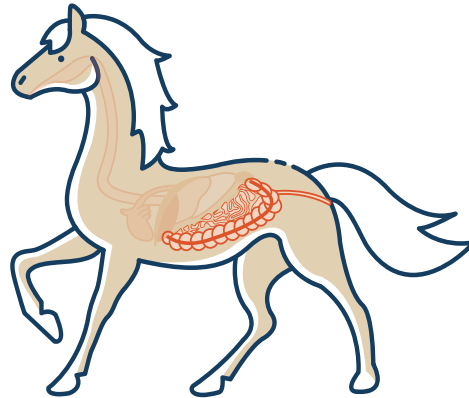
Probiotics are classified as feed additives and therefore require European authorization. A committee of the EFSA (European Food Safety Authority) decides whether an additive is authorized and for which area of application. These tests are carried out at regular intervals, meaning that a probiotic requires re-authorization over time. According to the valid Community Register of Feed Additives, the only additive currently explicitly authorized as a probiotic for horses is the yeast *Saccharomyces cerevisiae*, which according to Annex 1 of Regulation (EC) No. 1831/2003 may only be used as a digestive aid (category 4a) and to stabilize the physiological intestinal flora (4b). For other areas of application live yeast has no authorization.





Probiotics

Living, reproducible organisms such as the LIVING yeast



Prebiotics

Indigestible carbohydrates with nutritional-physiological value such as the INACTIVATED brewers' yeast

Live yeasts are NEVER brewers' yeasts

Live yeasts are living yeasts produced specifically for feeding in an industrial fermentation process, which are also obtained from the genus *Saccharomyces cerevisiae*. The only thing this yeast has in common with brewers' yeast is that it comes from the same species (genus). In contrast to LIVING yeast, BREWERS' yeast is always inactive! Also, only real brewers' yeast, obtained from side streams of the brewery, has a high content of protein, amino acids, and B vitamins, among other things. Live yeast has absolutely no nutritional value.

How can I recognize whether it is a probiotic?

Live yeasts (so-called probiotics) can be identified directly on the label. They must be labelled as zootechnical additives, including EU registration number, strain, and indication of CFU (colony forming units). This looks like this, for example:

Zootechnical additives:

Saccharomyces cerevisiae CBS 493.94 (4a 1704) 20.*10⁹ KBE

Is live yeast doping in equestrian sports?

The following table lists the five strains of *Saccharomyces cerevisiae* that are authorized for use in equine nutrition. According to the anti-doping and drug control rules of the German Equestrian Federation, three of these strains are listed as compliant and two of these strains are not listed = unclear.

Yeast	Strain	ADMR conformity (GERMAN EQUESTRIAN FEDERATION)
<i>Saccharomyces cerevisiae</i>	NCYC Sc 47	compliant
<i>Saccharomyces cerevisiae</i>	CNCM I- 4407	not listed
<i>Saccharomyces cerevisiae</i>	CBS 493.94	compliant
<i>Saccharomyces cerevisiae</i>	CNCM I- 1077	compliant
<i>Saccharomyces cerevisiae</i>	MUCL 39885	not listed

You want to know more about production, differences, effects, and practical use?

leiber-pferd.de/en/



We have been upcycling at world-market level since 1954 and keeping the environment and climate in mind.

