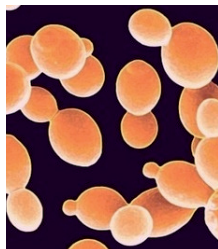


# EQUISTRO®



**Description:** Bio-Mos® is a prebiotic. Prebiotics can be defined as a non-digestible food ingredient that beneficially affects the host by selectively stimulating the growth and/or activity of one or a limited number of bacteria in the colon, and thus improving host health. This definition has been somewhat expanded upon to include non-digestible functional carbohydrates that effect the gut ecophysiology through pathogen adsorption or immune modulation. The development of prebiotic compounds has been primarily aimed at non-digestible oligosaccharides, consisting between approximately 2-10 saccharide units. Examples include fructooligosaccharides (FOS) or inulin, galactooligosaccharides (GOS), trans-galactooligosaccharides (TOS) and mannanoligosaccharides (MOS), like Bio-Mos®. Bio-Mos® is derived from a select strain of the yeast *Saccharomyces cerevisiae* by a proprietary process developed by Alltech. Bio-Mos® comes from the outer membrane, rich in mannan, that is extracted from the whole cell yeast.

**Properties:** Three primary modes of action of MOS are observed in animal studies; 1) adsorption (agglutination) of pathogenic bacteria; 2) modulation of the host immune response; and 3) enhancement of intestinal integrity.

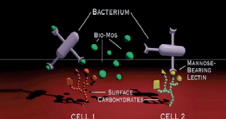


\*Perhaps the best studied and most well understood mode of action involves the competitive blocking of bacterial lectins. Adhesion of pathogens to the epithelium surface of the gut (colonization) is believed to be the first critical stage leading to infection. Mannose-specific lectins on the bacterial surface recognize glycoproteins (rich in mannose) on the host cell surface. When Bio-Mos® is included in the diet, they serve as alternate attachment sites for gram-negative bacteria present in the gut. Thus, Bio-Mos® added to regular meal stabilize good caecal bacteria and blocks colonization of pathogenic bacteria (*E. Coli*, salmonella) to maintain a healthy gastro-intestinal tract. Good intestinal micro-organisms are essential for synthesis of B and K vitamins. \*In addition, numerous studies have investigated the effect of MOS on humoral and cell immunity. Whilst the exact mechanisms have not been completely elaborated, significant evidence has been accumulated to propose MOS plays a multi-purpose role in immune modulation. Dietary inclusion of Bio-Mos® has been shown to affect humoral immunity in horses by enhancing plasma and colostral IgG and bile IgA antibody levels. So, Bio-Mos® supports the immune system and improves milk and colostrum quality, primarily immunoglobulin levels, with a positive impact on foal health. Consequently, it can reduce antibiotic use. \*At least, Bio-Mos® supplementation showed benefits to haematological parameters. A study has shown that horses receiving MOS have higher levels of red blood cell counts than those maintained on an unsupplemented diet. Researchers have linked this to an increase in physical condition and the potential for better oxygen delivery to muscles, which would assist in both training and racing performance.

**Possible uses:** Feed stuffs containing added Bio-Mos® are of benefit for every type of horses, since they all need good symbiotic micro-organisms in their intestines to leave well. These that particularly deserve MOS are breeding mares to enhance colostrum quality and antibody transfer to foal, weaning foal to protect intestinal integrity and every horse with gastro-intestinal disorders. It can also help competition horses and stressed horses to regulate their intestinal function. Bio-Mos® supplementation showed also benefits to race horses by enhancing red blood cell counts.

## BIO-MOS®

**Pathogen adsorption mechanism**



Bacteria attach to epithelial cells via lectins that recognize certain sugars. Many enteric pathogens attach via Type I fimbriae which recognize mannose.

## Vétoquinol



*Signe de Passion*