



MYCOROID
MULTILAYERED MYCOTOXIN CONTROL

مائیکورید
تمام اقسام کے مائیکوٹاکسنز اور بیکٹریل ٹاکسنز کا مکمل حل

IN GOOD HANDS

POWERFUL SOLUTION AGAINST BROAD-SPECTRUM
MYCOTOXINS AND OTHER BIOTOXINS CONTAMINATION

- 1 Adsorption 2 Biotransformation 3 Immunostimulation 4 Target organ protection



PATENT CO.®

EXPERTS IN PREVENTION



SOLUTION – OUR APPROACH TO COMBAT MYCOTOXINS & OTHER BIOTOXINS RELATED PROBLEMS IN ANIMAL FEED

MYCORAID COMPOSITION AND MODE OF ACTION



SPECIALLY SELECTED MINERALS

Based on unique technological process that results in STABILITY! SELECTIVITY! And EFFICACY! These minerals increase the binding against AFB1, T-2, FB1, OTA, ZEN, ergot alkaloids, citrinin, endotoxins and saxitoxin in the GIT.



IMMUNOPROTECTION

A scientifically proven ingredients from yeast cell wall (β -glucan and MOS) support immune function and improve animal performance with respect to average daily gain and feed conversion ratio, as well as the health.

β -glucan, stimulates non-specific and specific immunological response (antibodies), activate T cells, B cells, macrophages and natural killer (NK) cells. This activated immune system can fight against opportunistic pathogens.

MOS is highly efficient in the agglutination (binding) of pathogens, thereby reducing the risk of pathogen colonization to the gut wall.



MICROBIAL CONCOCTION FOR BIOTRANSFORMATION AND BIOREMEDIATION

Internationally deposited strains of *Bacillus subtilis* and *Bacillus licheniformis*. These strains are Stable at all pHs and thermostable. These strains result in Biotransformation / bioremediation of mycotoxins ZEN, AFB1 and OTA and proven probiotic effect

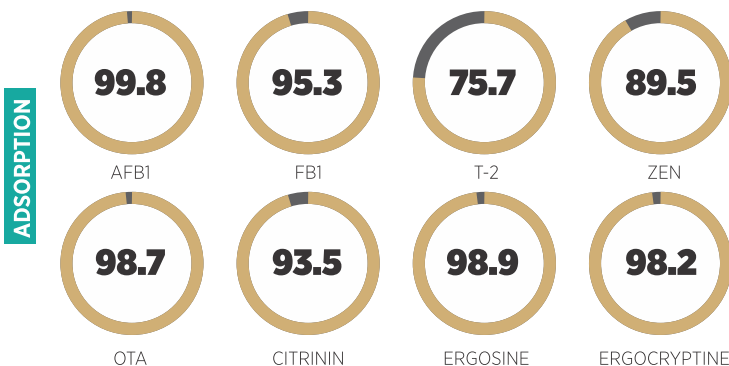


HERBAL EXTRACT (HEPATOPROTECTION)

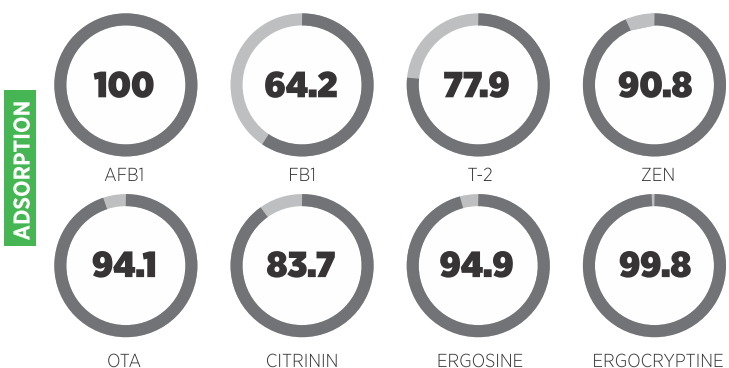
A scientifically proven blend of carefully selected herbal extracts support liver immune function, antioxidation (free radical scavenging) and Inhibition of lipid peroxidation.

MYCORAID EFFICACY DATA

Detoxification efficacy of MycoRaid against mycotoxins (%) at pH 3.0

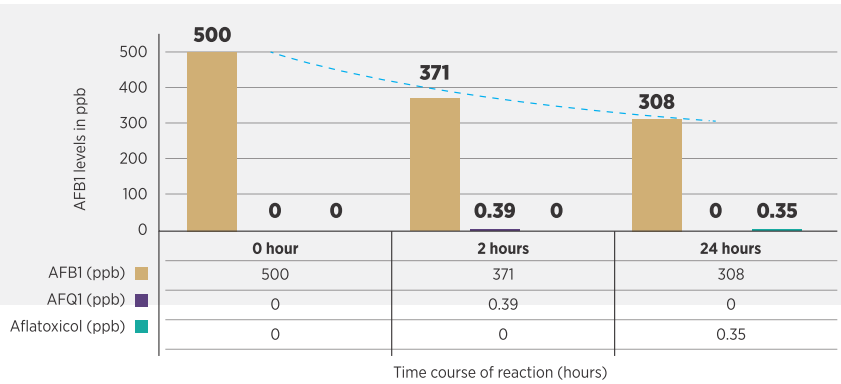


Detoxification efficacy of MycoRaid against mycotoxins (%) at pH 6.5



Biotransformation of mycotoxins by MycoRaid

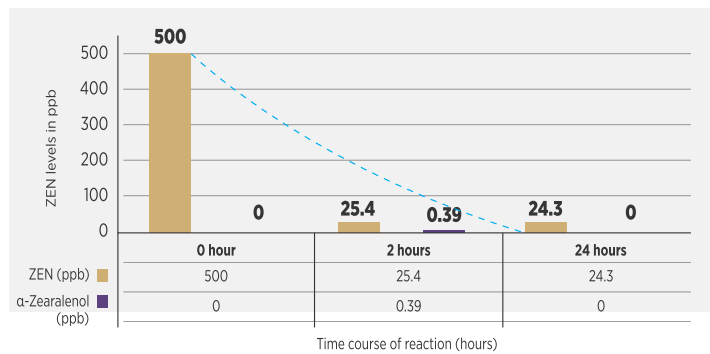
Degradation of AFB1 by *Bacillus sp*



- AFB1 is metabolized by *Bacillus sp* via AFQ1 and Aflatoxinol.
- AFQ1 and Aflatoxinol was detected in very low levels (0.39 and 0.35 ppb) and these are less toxic than AFB1.
- The detected concentrations of these metabolites at 0.39 and 0.35 ppb do not have any negative effects on animal health and in theory these can bind with MycoRaid components.

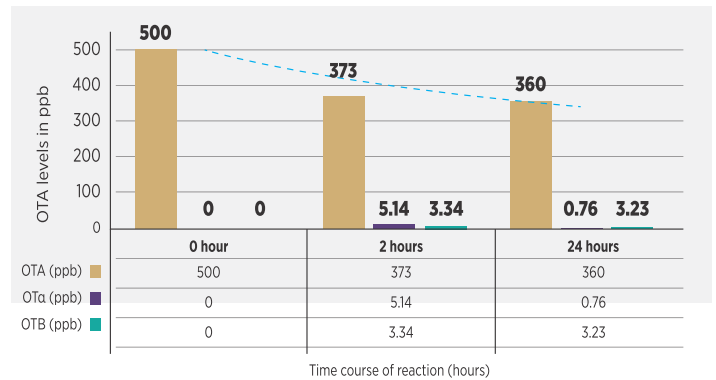
Biotransformation of ZEN by *Bacillus sp*.

Degradation of ZEN by *Bacillus sp*



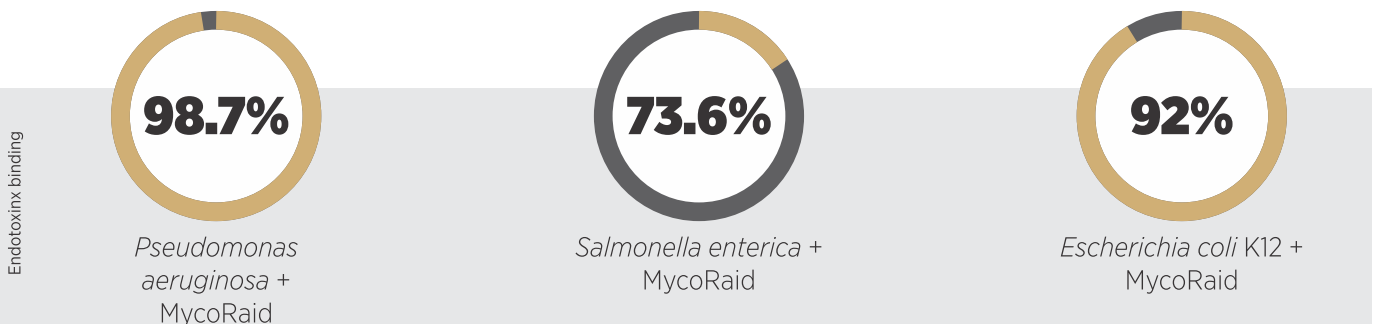
Biotransformation of OTA by *Bacillus sp*.

Degradation of OTA by *Bacillus sp*



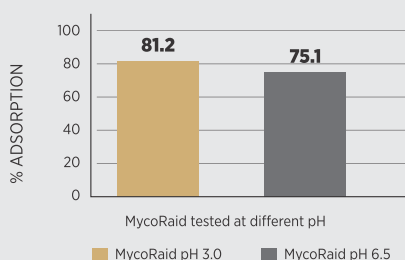
Endotoxins binding with MycoRaid

% LPS binding/Endotoxins binding with MycoRaid carried out at Molendotech, *Devon, UK*



MycoRaid binds 99% of *Pseudomonas aeruginosa* endotoxins, 65-92% of *Escherichia coli* k12 and 73% of *Salmonella enterica* Endotoxins.

Binding with Algal toxins (Saxitoxin)



MycoRaid can bind more than 75% of saxitoxin at pH 3.0 and 6.5.

Adsorption of vitamins and amino acids by MycoRaid, tested at University of Barcelona and at PATENT CO.

MycoRaid has no significant binding for vitamins and amino acids when compared with other binders at pH 3.0 and 6.5

MycoRaid – thermostability

MycoRaid and its ingredients are stable at 120°C for 3 mins.



BIOTRANSFORMATION:

بائیوٹرانسفارمیشن کے عمل کے ذریعے مائیکورائیڈ میں موجود پروبائیوٹکس مائیکوٹاکسنز کو ایسے اجزاء میں تبدیل کر دیتے ہیں جس سے ان کا زہریلا پن بہت کم یا ختم ہو جاتا ہے اور وہ جانور کو نقصان نہیں پہنچاتے۔



ADSORPTION:

مائیکوٹاکسنز کو ٹاکسن بائنڈر کیساتھ جوڑنا۔ اس مقصد کیلئے مائیکورائیڈ کے اندر خاص قسم کی کِلے (Clay) استعمال کی گئی ہے، جسے Modified Clay کہا جاتا ہے۔ اس تبدیلی کی وجہ سے کِلے (Clay) افلا ٹاکسن کیساتھ ساتھ دوسرے ٹاکسنز (اکرا ٹاکسن، زیرولینول، بیکٹریل ٹاکسن) کو بھی بائنڈ کرتی ہے۔



HEPATOPROTECTION:

اس میں شامل خاص جڑی بوٹیوں کا عرق جانوروں کے جسم میں مختلف اعضاء (جگر، گردہ، معدہ اور آنتریوں) کی حفاظت کرتے ہیں اور مائیکوٹاکسنز کی وجہ سے ہونے والے تکسیدی عمل کو کم کرتے ہیں۔



IMMUNOPROTECTION:

مائیکورائیڈ میں موجود پیسٹ اور اسکے اجزاء (پیٹا گلوکین، اولیگوسیکرائیڈز) جانوروں کے جسم میں قوت مدافعت کو بڑھاتے ہیں۔ یہ اجزاء جانوروں کی آنتوں اور معدہ کے نظام کو بہتر بناتے ہیں اور ان کے دودھ، گوشت اور وزن میں اضافہ کرتے ہیں۔

MYCOROID MULTILAYERED PROTECTION!

MycoRaid powered by research & development, in vivo trials and proven efficacy!

Best solution against broad-spectrum mycotoxins and other biotoxins contamination.

Allows liver, GIT, kidneys and other organs to function without interference from toxins

3

Supports optimal functioning of the immune, liver, reproductive and digestive systems under commercial conditions improving animal welfare.

4

Sustains high level of animal fertility and overall performance!

DOSAGE



Cattle, Buffalo: 10-15 g / head / day
Sheep, Goat: 5-10 g / head / day
Poultry: 0.5-1 kg / ton of feed