nufense

Mycotoxin Management Solutions

standard

EURO CERT
CERTIFIED M.S.
ISO 22000:2018
742/T

EURO CERT
CERTIFIED M.S.
ISO 9001:2015
2387/Δ

CERTIFIED
FAMI-QS

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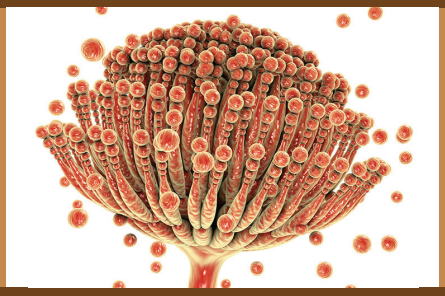
Solutions for the Mycotoxin Challenges

Mycotoxins are secondary metabolites of low molecular weight produced by fungi, mostly by saprophytic moulds growing on a variety of feed and foodstuffs (Turner et al., 2009).

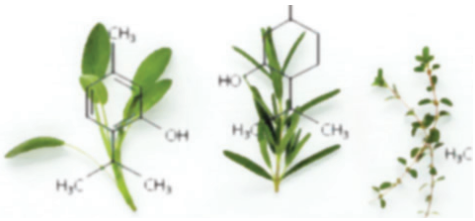


Contamination of feeds with mycotoxins is a worldwide problem with serious impact on livestock production. Mycotoxin -detoxifying agents are used to control their negative effects.

The most well-known approach for detoxification involves the use of nutritionally inert adsorbents with the capacity to bind and immobilize mycotoxins in the gastrointestinal tract (GIT) of animals, thus reducing their bioavailability (Magnoli et al., 2011).

nufense standard

- Mineral clays with a selective polar binding capacity
- Dry Yeast Cell wall
- Natural bioactive ingredients



The **blend of mineral clays** used is involved in many biochemical processes through ion exchange, absorption and catalysis with a highly sorbitive behavior and enhanced hydrophilic (anti-diarrhea) and oleophilic (toxin-binding) activity.

Dry Yeast Cell wall: a premium yeast fraction rich in β-glucans and man-nan-oligosaccharides (MOS).
It prevents colonization of the GIT by pathogens, stimulates the immune activity of the phagocytic cells, and enhances the action of beneficial bacteria such as Lactobacillus and Bifidobacterium, creating an immuno-logical wall against diseases.

Natural bioactive ingredients: mycotoxins not only reduce animal performance, but they also cause significant liver damage. Certain mycotoxins have a strong hepatotoxic and hepatocarcinogenic effect in exposed animals. **nufense standard** contains natural phenolic compounds (**lyophilized hydroxytyrosol and oleuropein**) with proven anti-inflammatory and antioxidant activity that protects liver from the free radical damage produced by mycotoxins.

Aiming to determine the mycotoxin detoxifying activity of **nufense standard** in feed, a mycotoxin eliminating analysis was carried out. Two pH values (pH=4.5, pH=7.5) were tested, simulating gastric and intestinal juice. In order to determine the mycotoxin eliminating efficiency of the product during the transition in the gastrointestinal tract, 6 incubation times were used (0,30,60,120,240 and 300 min). The mycotoxin concentration was calculated using HPLC-DAD chromatographic analysis.
Results: Strong adsorption efficiency: Aflatoxin concentration decreased by more than 95% for 30 min incubation time.

Trilogy Results:

	AF1	ZEN
% Efficiency	99.6	70.7
Toxin conc.	4000 ppb	500 ppb

EURL
European Union Reference Laboratory

EURL Method:
Adsorption of 4000 ppb AB1 with 0,02% product at pH 5.0

Dosage for all species: 1 kg / ton of feed

Note: Dosage depends on the mycotoxin risk level