

maximum efficiency against mycotoxins

sequestering effect of aluminosilicates

toxidex® is essentially based on the capacity of aluminosilicates to retain mycotoxins. This so-called “sequestering” property is due to its reticulated structure, within which mycotoxins become binded.

A good mycotoxin “sequestering” agent must fulfil three basic principles:

- Have a **reticulated structure** that will act to filter digestive juices and retain mycotoxins.
- Be **indigestible**, such that it is excreted together with mycotoxins.
- Be **harmless** and not retain beneficial compounds (vitamins, xanthophylls, etc.)

The effect of sequestering agents occurs during the **digestive** stage, in which the passage of mycotoxins to the animal through the intestinal barrier is prevented.

toxidex® anti-mycotoxin agent with triple action

toxidex® has a **double sequestering** effect and a mycotoxin **inhibiting and destroying** effect. The **three complementary mechanisms** ensure maximum efficacy in protecting the animal against mycotoxins.



1 mechanism of physical binding

toxidex® binds mycotoxins through a **physical trapping mechanism** based on the steric attraction effect of aluminosilicates on mycotoxins. Aluminosilicates have optimal molecular shapes and geometries for interacting with mycotoxins.

2 mechanism of polar attraction

In **toxidex®** inorganic aluminosilicates also act by means of **polar attraction**. Aluminosilicates and most of mycotoxin have positive and negative charges. Mycotoxins are attracted by the opposite charges of the aluminosilicates and are strongly retained. In **toxidex®** the polar attraction is increased by the presence of surfactants.

3 inhibition and destruction

Aluminosilicates in toxidex are chemically activated by an ammonifying complex with an **inhibitory and destroying effect**.

This mycotoxin destroying complex attacks mycotoxins and ensures their inactivation. The complex is specially added inside the silicate net, that assures no risk of feed contamination by **ammonia***.

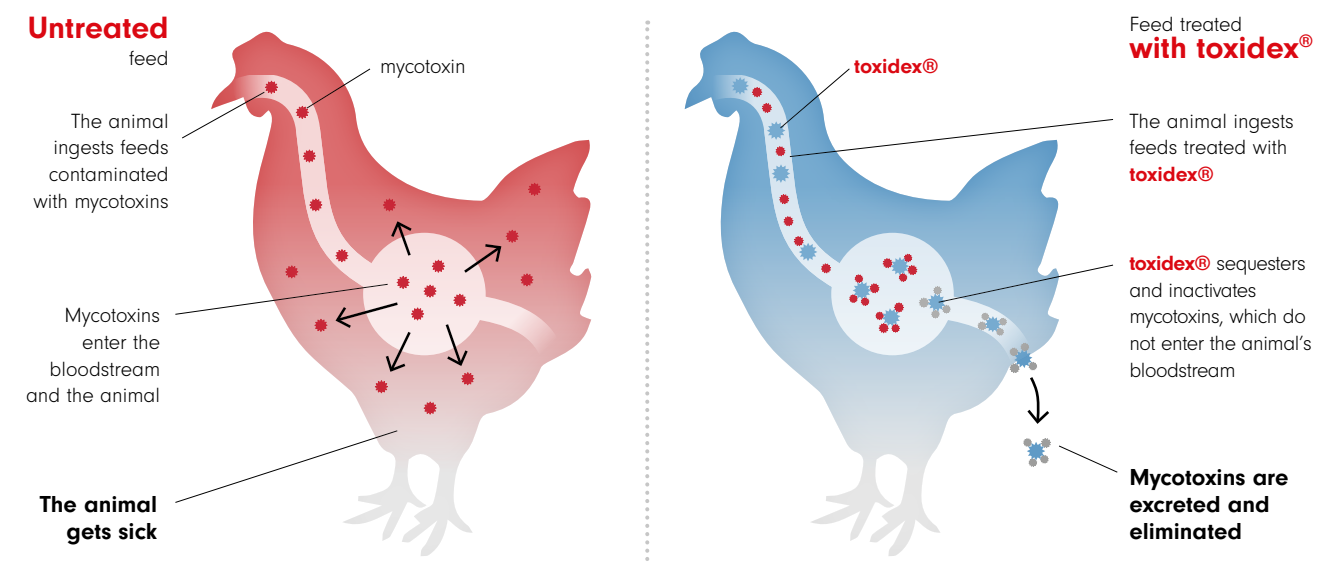
*Among the various mechanisms for destroying mycotoxins (chlorination, hydrolysis, oxidation, acidification, ammoniation, etc.), **ammonia** is the chemical agent with the greatest potential for large-scale detoxification.

Thanks to a carefully considered combination of aluminosilicates, **toxidex®** offers a broad spectrum of mycotoxin adsorption.



effect of toxidex® on the animal

binds and eliminates mycotoxins



broad spectrum mycotoxin adsorption

toxidex® differs from all other sequestering agents on the market in that its formulation is based not on a single aluminosilicate, but on a combination of several of them, selected to cover a broad mycotoxin adsorption spectrum.

So that the adsorption spectrum of **toxidex®** is as broad as possible, thus increasing the likelihood of retaining all types of mycotoxins, including those that are unknown to us, the choice of aluminosilicates has been based on “in vitro” and “in vivo” experiments against different mycotoxins. The result is a **mixture of three natural aluminosilicates** that complement each other in its mycotoxin adsorption spectrum.

Percentages of adsorption of different types of mycotoxins (aluminosilicates A, B and C and **toxidex®**)

