

# Product Information



## Notox<sup>®</sup>LS

The mycotoxin binder

### What is Notox<sup>®</sup>LS?

Notox<sup>®</sup>LS is a broad spectrum mycotoxin binder that has been proven to control the risks of mycotoxins. Notox<sup>®</sup>LS has been selected for its unique binding capacities on five major mycotoxins. In an independent in vitro trial done at the Trilogy Analytical Labs in the USA, Notox<sup>®</sup>LS clearly showed higher binding capacity than other clay-based products (Table 1).

**Table 1.** Notox<sup>®</sup>LS benchmarked against five mycotoxins for in vitro binding efficiency

Product Type						Efficiency Total
	Zearalen One	Ochratoxin A	Fumonisin	T2 Toxin	Aflatoxin B1	
Notox <sup>®</sup> LS	100.00	98.90	90.50	77.90	86.10	453.40
Modified Clay 1	98.50	95.50	98.00	39.80	95.30	427.10
Modified Clay 2	29.60	75.80	88.80	61.40	98.30	353.90
Clay 3	45.00	79.50	88.80	8.50	99.00	320.80
Clay 4	30.10	80.10	97.10	2.50	97.30	307.10
Clay 5	2.70	51.10	79.50	1.70	90.50	225.50
Esterified MOS 1	53.00	44.50	11.30	79.60	2.40	190.80
Clay 6	9.30	26.00	0.00	0.00	84.80	120.10
Clay 7	2.10	22.50	0.00	0.00	84.40	109.00
Clay 8	0.40	6.50	0.00	0.00	64.20	71.10
Clay 9	8.10	1.00	0.00	0.00	0.00	9.10



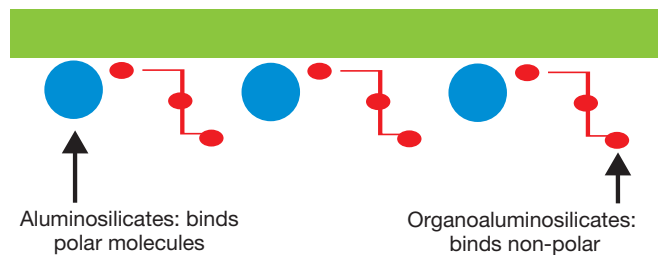
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## How does Notox® work?

Notox®LS is a bentonite clay based product with the ability to bind with - and therefore protect animals from - a very broad spectrum of different mycotoxins. The ability to be active against such a broad spectrum of mycotoxins comes from its composition. Notox®LS is comprised of two main groups of active ingredient in order to have the broadest possible spectrum of mycotoxin binding ability (illustrated in Figure 1).

**Figure 1.** The two active ingredients and their different binding abilities



### Aluminosilicates

These have surface cations Sodium<sup>2+</sup> and Calcium<sup>2+</sup> which have a high affinity for water. Hydrated aluminosilicates have a high affinity for polar molecules, including the mycotoxin Aflatoxin (Af).

### Organosilicates

These minerals are aluminosilicates with an organic compound. They have lower polarity and different specific functional groups and therefore bind to the non-polar mycotoxins Zearalone (ZON), Ochratoxin (Ot), Fumonisin (FUM) and Trichothecenes T2.

## What are the benefits of Notox®?

Dairy cows are sensitive to mycotoxins. Mycotoxins can have serious negative effects on reproductive performance. Two trials have been performed to assess the efficiency of binding of Notox®LS versus another well-known product (product A).

On average, Notox®LS gave the best performance and significantly reduced the abortion rate by 50% (Table 2).

**Table 2.** The effect of Notox®LS and product A on reproductive performance of dairy cows

	Product A	Notox®LS	P value
Monthly pregnancy rate (%)	7.1	8.3	NS
Monthly abortion rate (%)	2.2	1.1	<0.05

## Feeding Notox®LS

Notox®LS can be fed as a farm pack or incorporated into minerals. Target Feed rates for dairy cows are:

	Feed rate (g/head/day)	
	Moderate risk	High risk
Notox®LS (incorporated into mineral)	10g	20g
Notox®LS farm pack	75g	150g

## When could Notox®LS be beneficial on-farm?

Each Mycotoxin results in a specific set of symptoms in the herd. Notox®LS can be used if mycotoxin presence is suspected.

- T2 Vomitoxin**: Feed rejection, Vomiting
- T2**: Gastroenteritis, Intestinal haemorrhages
- Vomitoxin**: Cystic ovaries
- T2 Aflatoxin Vomitoxin**: Milk contamination, Decrease in yield
- T2 Vomitoxin Zearalenone**: Immunosuppression
- Zearalenone**: Vulvovaginitis, Prolapse, Embryonic mortality

Provimi® is brand of Cargill; a family-owned company with more than 150 years' experience in developing food and feed ingredients. Cargill develops results-oriented nutritional solutions and feeding programmes, which in turn help producers grow their business. Premixes and concentrates, speciality feeds and additives are produced under the Provimi® brand. Amaferm™ is a registered trademark of BioZyme Incorporated.