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biologics®**  
solutions by nature

# ULTRADTOX® FACTS

- Proprietary formulation for broadest range of toxin binding and degrading capabilities.
- MOS for effective pathogen binding in the GI tract to reduce gut challenges.
- Sarsaponin to disrupt rumen protozoa and improve nutrient digestibility.
- Improved immune response for overall animal health and productivity.

### ► Product Description:

UltraDtox® is an all-natural, highly concentrated proprietary formulation of refined bioactive carbohydrates, fermentation extracts and silicates proven to increase productivity and improve animal health by reducing the effects of pathogens and mycotoxins.

### ► Modes of Action:

#### Microbial & Fungal Enzymes –

Non-polar toxins, such as DON, T-2 and Zearalenone, can be degraded by specific enzymes, rendering them harmless, bound and easily removed from the GI tract. For example, the yeast enzyme epoxidase is very effective at breaking down the epoxide ring structure which is part of many mycotoxins. Additional bacterial enzymes are used to disrupt the chemical structure of other mycotoxins (Figure 1).

**Proprietary Clay Blend –** Using a combination of clays, UltraDtox delivers a broader range of binding capabilities. This combination approach allows us to target each toxin based on its unique chemical structure. Polar toxins, like aflatoxin, are readily bound by some clays.

**MOS –** The MOS component of UltraDtox provides effective pathogen binding in the GI tract.

**Beta Glucan –** Concentrated from a unique species of algae, improves both innate and adaptive immune response.

**Sarsaponin –** Derived from the Yucca cactus, sarsaponin disrupts protozoa cell membranes, killing them. Rumen protozoa consume millions of rumen bacteria, reducing the microbial protein available to the cow. Rumen methanogens also use protozoa to generate methane, robbing the cow of volatile fatty acids and increasing the overall methane output. Including sarsaponin in the diet decreases rumen protozoa while improving nitrogen retention and rumen efficiency.

By combining the action of multiple binders with the activity of several enzymes, UltraDtox can neutralize many mycotoxins (Figure 2). Add in the pathogen binding from MOS, protozoal reduction from sarsaponin and immune modulation of concentrated beta glucan and UltraDtox delivers comprehensive protection from mycotoxin, mold and pathogen challenges.

Figure 1. Degradation of ZON, FUM & DON by Enzymes

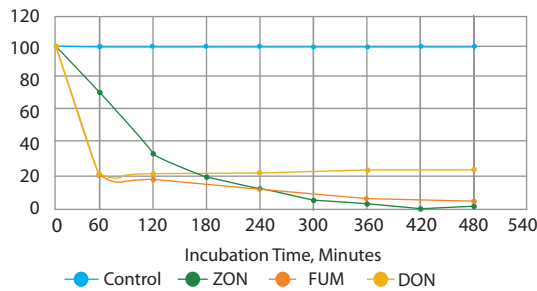
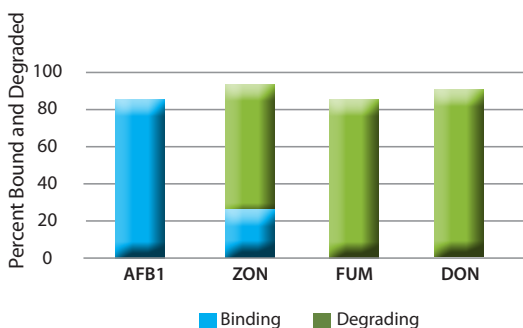
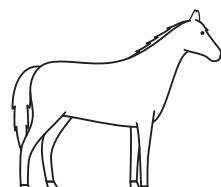
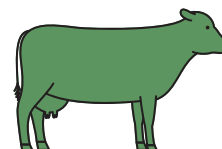
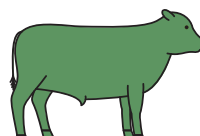


Figure 2. Relative Binding or Degrading of Mycotoxins



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See how UltraDtox can protect your herd against the many mycotoxin, mold and pathogen challenges found in feed.  
Visit [naturalbiologics.com](http://naturalbiologics.com) today.

To learn more, visit [naturalbiologics.com](http://naturalbiologics.com) or 844.NAT.BIOL (628.2465)



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# ULTRADTOX®

► **Product Description:**

UltraDtox is an all-natural, highly concentrated product formulated with microbial and fungal enzymes, yeast extract (*Saccharomyces cerevisiae*), *Yucca schidigera* extract, plant protein product and aluminosilicates. The biologically active compounds from these natural sources have well-established benefits for animal health and productivity by reducing the effects of pathogens and associated toxins.

► **Purpose:**

UltraDtox is to be used to supplement complete diets for all stages of ruminant production.

► **Feeding Directions:**

To be included in complete diets as indicated below, or as recommended by a qualified nutritionist.

For ruminants, feed 0.75 to 1.25 grams per 100 pounds of bodyweight per day, typically between 10-20 g/hd/day.

**Density:** 32 - 36 lb./cu. Ft.

**Appearance:** Light tan, free-flowing powder

**Packaging:** 55.1 lb. (25 kg) bags or 2000 lb. totes

**Shelf Life:** Two years from date of manufacture when stored in a cool, dry place in the original package.

**Precautions:** Use only as directed.

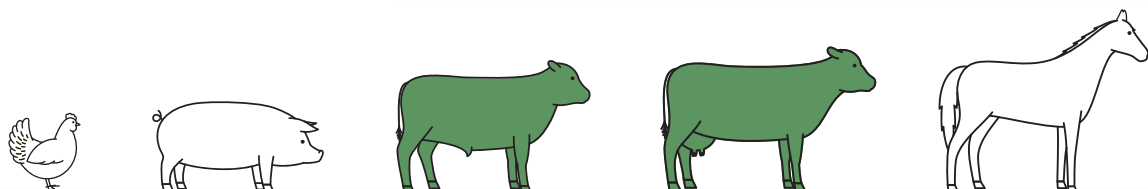
Avoid inhalation of dust.



Guaranteed Analysis:		
Crude protein	not less than	14%
Crude fat	not less than	2.0%
Crude fiber	not more than	9.0%
Zinc	not less than	0.9%
Moisture	not more than	10.0%
Ash	not more than	49.0%

Reduce the challenges found in feed with UltraDtox.  
Visit [naturalbiologics.com](http://naturalbiologics.com) today.

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