

BIVIGRO

We Focus On All-Round Nutrition & Health



Moldent®

Compound Toxin Binder
Yeast Cell Wall + Bentonite
Biological & Physical Eliminate The Mycotoxin



Bivigro
Animal Health
Limited

Moldent®

Relieve the harm of mold and mycotoxin, inhibit the growth of intestinal pathogenic bacteria, maintain the health of animal

2-in-1

Ultra Effect Brings By Moldent



Eliminate & remove various mycotoxins

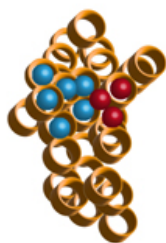


Absorb pathogens, virus to promote gut health

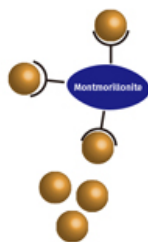


Improve Immunity & anti-stress, promote performance

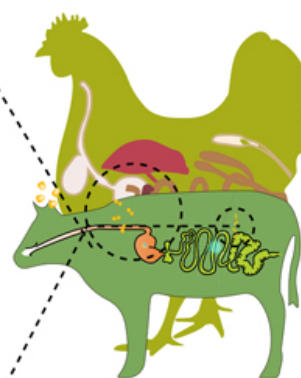
Multi Effect Of Moldent For Eliminate Toxin In Intestines



Yeast cell wall binds to mycotoxins (e.g., aflatoxins, zearalenone) in the gut, preventing their absorption. It also promotes beneficial gut bacteria growth, enhancing intestinal immunity and nutrient absorption.



Modified Bentonite has a high surface area and negative charge, effectively adsorbing polar mycotoxins (e.g., aflatoxins) and heavy metals. It forms stable complexes, reducing toxin entry into the bloodstream.



Yeast cell wall is particularly effective against non-polar mycotoxins, such as ochratoxins and fusarium toxins, due to its specific binding properties.

Mannan oligosaccharides is the effective ingredient contained in yeast cell walls and consist of short chains of mannose sugars. Their adsorption mechanism involves:

- (1) Hydrogen Bonding: The hydroxyl groups in MOS form hydrogen bonds with mycotoxins, such as zearalenone and deoxynivalenol (DON).
- (2) Selective Binding: MOS has a high affinity for certain mycotoxins due to its unique molecular structure, which allows it to bind & neutralize toxins effectively.

Modified bentonite is particularly effective against polar mycotoxins, such as aflatoxins, due to its strong binding affinity.

Bentonite is a natural clay mineral with a layered structure. Its adsorption capacity is based on two main mechanisms:

- (1) Ion Exchange: Bentonite contains negatively charged layers that attract positively charged mycotoxins, such as aflatoxins, through electrostatic interactions.
- (2) Surface Adsorption: The large surface area and porous structure of Bentonite allow it to physically trap mycotoxins, preventing their absorption in the digestive tract.

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The combination of Modified Bentonite and Yeast Cell Wall in Moldent creates a synergistic effect, enhancing overall mycotoxin adsorption:

(1) Broad-Spectrum Adsorption: Bentonite targets polar mycotoxins, while MOS adsorbs non-polar mycotoxins. Together, they provide comprehensive protection against a wide range of mycotoxins.

(2) Enhanced Stability: Bentonite provides a physical barrier to trap mycotoxins, while MOS strengthens the binding through chemical interactions. This dual action reduces the risk of mycotoxin release in the digestive system.

(3) Gut Health and Immune Support: Yeast Cell Wall not only adsorbs mycotoxins but also promotes gut health by preventing the attachment of harmful bacteria to the intestinal lining. Additionally, it supports immune function, further enhancing animal well-being and productivity.

The specifications of Moldent

Commercial name	Moldent
Guarantee value	Mannooligosaccharides MOS 10%min
Composition	50% Yeast Cell Wall 50% Modified Bentonite
Adsorption rate	Aflatoxins adsorption rate $\geq 95\%$ Zearalenone adsorption rate $\geq 90\%$
Appearance	Light yellow powder
Shelf Life	24 months
Storage	25kg/bag, Store in a cool and dry place

Dosage For Different Mycotoxin - 95% Absorption Rate

Moldent widely used for all animal feeds including poultry, livestock, aquatic species

Doage For Different Mold Type	Unit	Safy level of Mycotoxin No Need Treats	Slight contaminated 0.5-1.0 kg/ton	Middle contaminated 1.5-2.0 kg/ton	Seriously contaminated 2.5-3.0 kg/ton
Aflatoxins	ppb	20	50	100	250
Zearalenone	ppb	200	200	500	1000
T2 Toxin	ppb	200	200	500	1000
Fumonisin	ppm	10	10	20	30
Deoxynivalenol	ppb	500	1000	2000	3000
Ochratoxin	ppb	200	250	500	1000
Diacetoscirpenol	ppb	400	400	1000	1500

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Moldent® Trials For Absorb Rate of Artificial Aflatoxins B1 & Zearalenone

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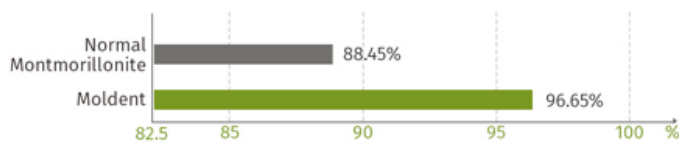


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Effect Of Moldent On Aflatoxins B1 Absorption Rate

	Aflatoxins B1 Adsorption Rate	Aflatoxins B1 Adsorption Amount
Normal Montmorillonite	88.45 %	66.33 ug/kg
Moldent® group	96.65 %	72.48 ug/kg

EFFECT OF MOLDENT ON AFLATOXIN B1 ADSORPTION RATE



CONCLUSION

Compared with the normal montmorillonite, the moldent group improve the absorption aflatoxin B1 by **8.2%**

EFFECT OF MOLDENT ON AFLATOXIN B1 ADSORPTION AMOUNT



CONCLUSION

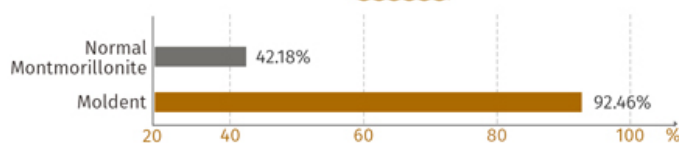
Compared with the normal montmorillonite, the moldent group absorb more aflatoxin B1 amount **6.15 ug**

Trial conditions: 2.5 mg/ml of MOLDENT compound toxin binder was added to the standard solution of aflatoxin B1 at a concentration of 75 ug/kg, and the supernatant was subjected to a constant temperature shaking water bath at pH 7.0 for 60 minutes, and then the supernatant was collected to calculate the adsorption capacity of MODLENT to aflatoxin B1

Effect Of Moldent On Zearalenone Adsorption Rate

	Zearalenone Adsorption Rate	Zearalenone Adsorption Amount
Normal Montmorillonite	42.18 %	506 ug/kg
Moldent® group	92.46 %	1109 ug/kg

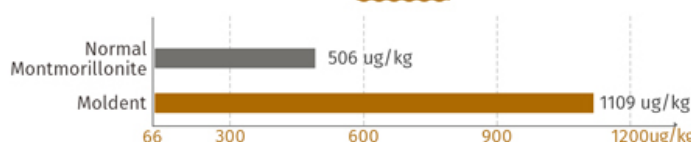
EFFECT OF MOLDENT ON ZEARELENONE ADSORPTION RATE



CONCLUSION

Compared with the normal montmorillonite, the moldent group improve the absorption Zearalenone by **50.28%**

EFFECT OF MOLDENT ON ZEARELENONE ADSORPTION AMOUNT



CONCLUSION

Compared with the normal montmorillonite, the moldent group absorb more Zearalenone amount **603 ug**

Trial conditions: 2.5 mg/ml of MOLDENT compound toxin binder was added to the standard solution of Zearalenone at a concentration of 1000 ug/kg, and the supernatant was subjected to a constant temperature shaking water bath at pH 7.0 for 60 minutes, and then the supernatant was collected to calculate the adsorption capacity of MODLENT to Zearalenone

Bivigro® is an innovative technology-based company focusing on research, production and sales of antibiotic substitutes and animal nutritional products, the aim is to offer animal performance solutions, and making your effort to be more efficiency.

Learn more at bivigro-animal-health.com

Questions?

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