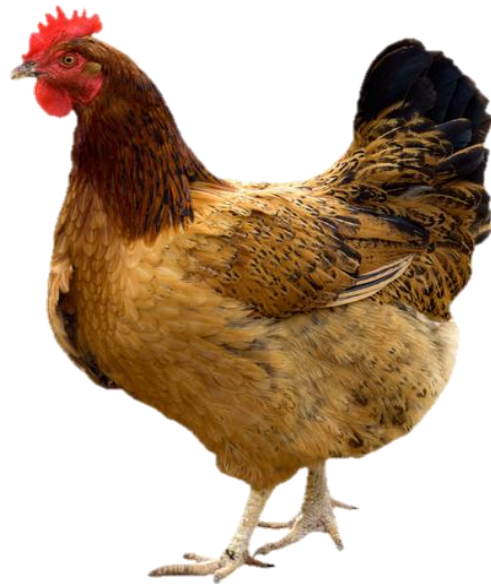
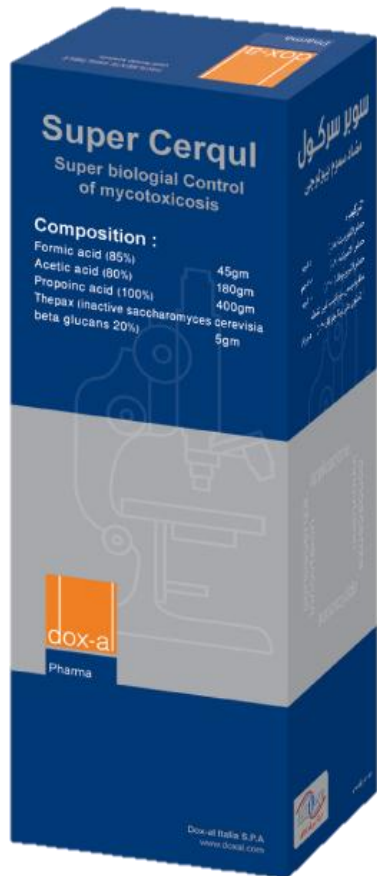


Super Cerqual

Powerful Biological Anti-Mycotoxins



Super Cerqual Compositions

1-Thepax.....

50 X 10⁹ CFU inactivated *Saccharomyces Cerevisiae*

2- Group of protected organic acids

Propionic acid :400 gm

Acetic acid :180 gm

Formic acid :45 gm

Thepax

**Total number of inactivated stabilized
cells of *Saccharomyces cerevisiae***

50×10^9 CFU/g

(colony-forming units / gm)

Highly Nutritional

Chemical Composition on dry mater

Minerals in mg / kg

Iron	78.00
Calcium	838.20
Phosphorus	8 941.20
Sodium	33 529.40
Cobalt	4.80
Copper	14.80
Manganese	5.00
Zinc	67.10
Potassium	17 323.50
Magnesium	14.10

Nucleic acids in g/kg

DNA	3.57
RNA	17.87
Cytosine	2,50
Uracile	6,33
Guanine	5,41
Thimine	0,85
Adenine	6,35
Total	21,44

Aminoacids in g /kg

Alanine	19.00
Arginine	16.50
Aspartic acid	29.80
Glycine	14.20
Isoleucine	15.30
Leucine	21.80
Glutamic acid	37.10
Lysine	25.00
Cystine	3.40
Methionine	4.40
Phenylalanine	13.30
Tyrosine	11.70
Threonine	15.60
Tryptophane	4.00
Proline	10.20
Valine	18.10
Histidine	6.40
Serine	15.20

Vitamines, in mg / kg :

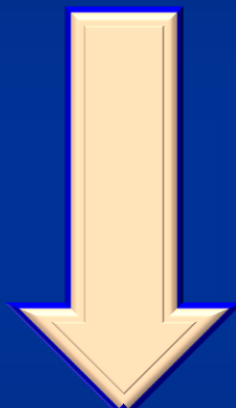
Vitamine B1	10.76
Vitamine B2	31.60
Vitamine B6	4.58
Vitamine B12	3.02
Vitamine H2	6.87
Nicotinic acid	542.80
Pantothenic acid	84.76
Folic acid	traces
Biotine	2.29
Choline	

Glucans and mannans

Glucanes 18%
Mannanes 16%
Malic acid
Glutathione



**Thepax has a synergistic effect
with Organic acids and resist to pH 2**



**Super
cerqual**

Super Cerqual

I-Broad spectrum Anti-Mycotoxins

**II-Efficient control of Mycotoxins
secondary complication**

I-Broad spectrum Anti-Mycotoxins



1-Biological adsorption

2-Enzymatic biotransformation

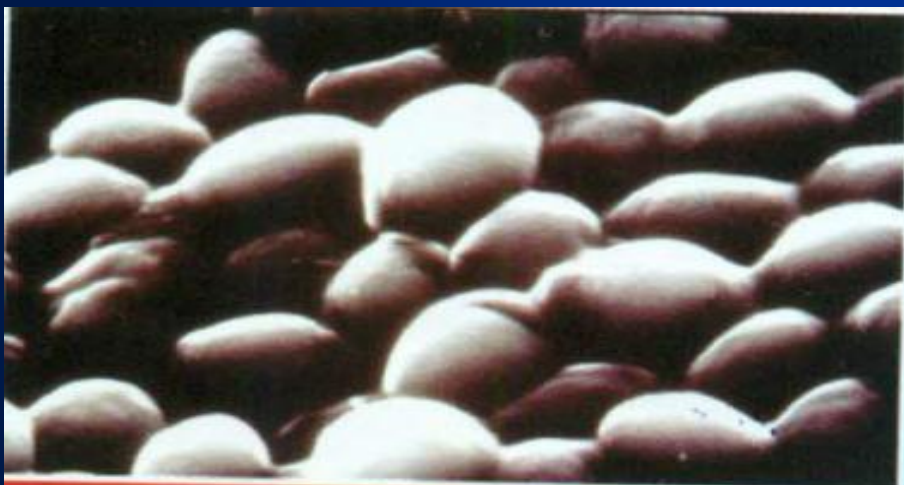
3-PH inhibition

1-Biological adsorption

Mannan oligosaccharides

“M.O.S 18 %”:

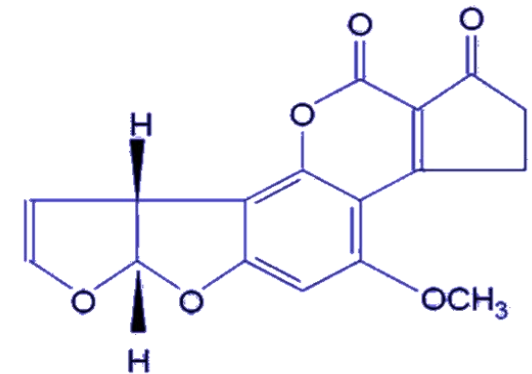
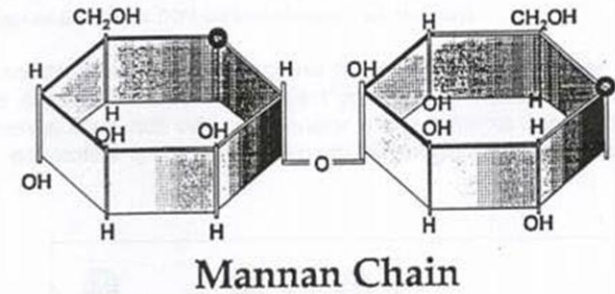
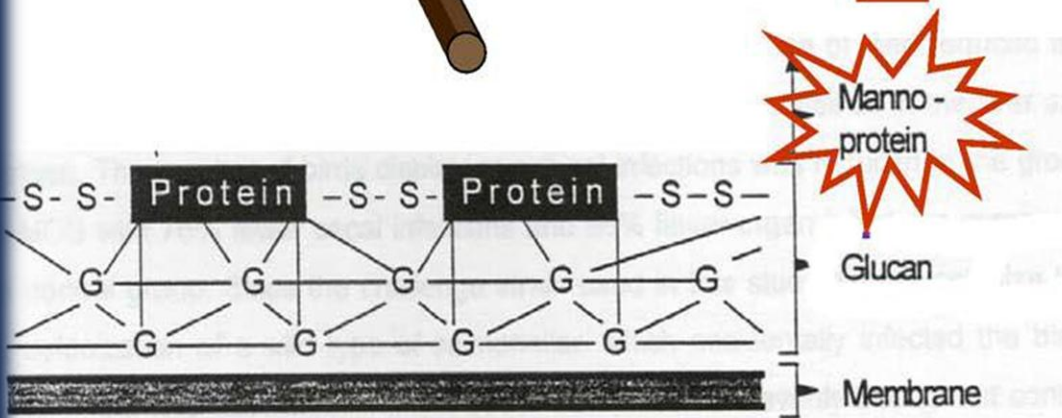
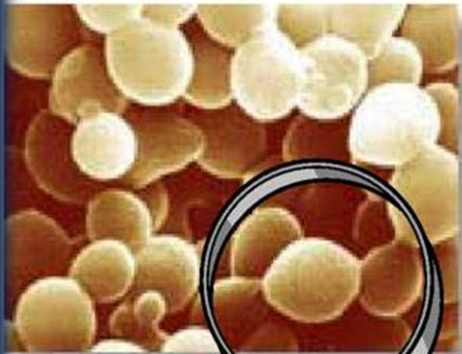
Responsible for Capture & Adsorption of wide range of mycotoxins (polar –less polar) and has **low affinity** to adsorb vitamins and other nutrients.



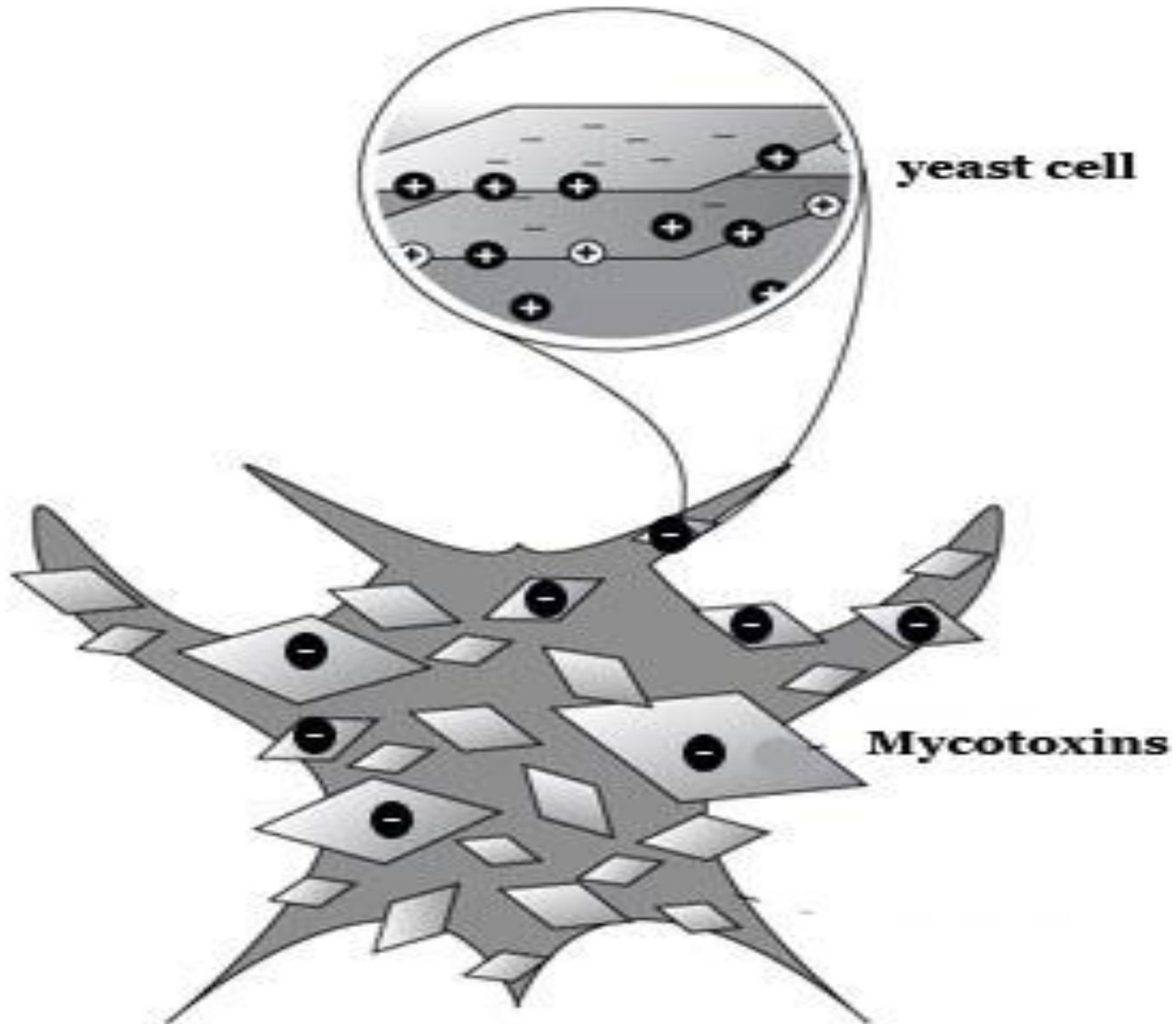
Whole yeast cells of *saccharomyces cerevisiae*



Structure of Yeast cell (mannannoligosaccharides)

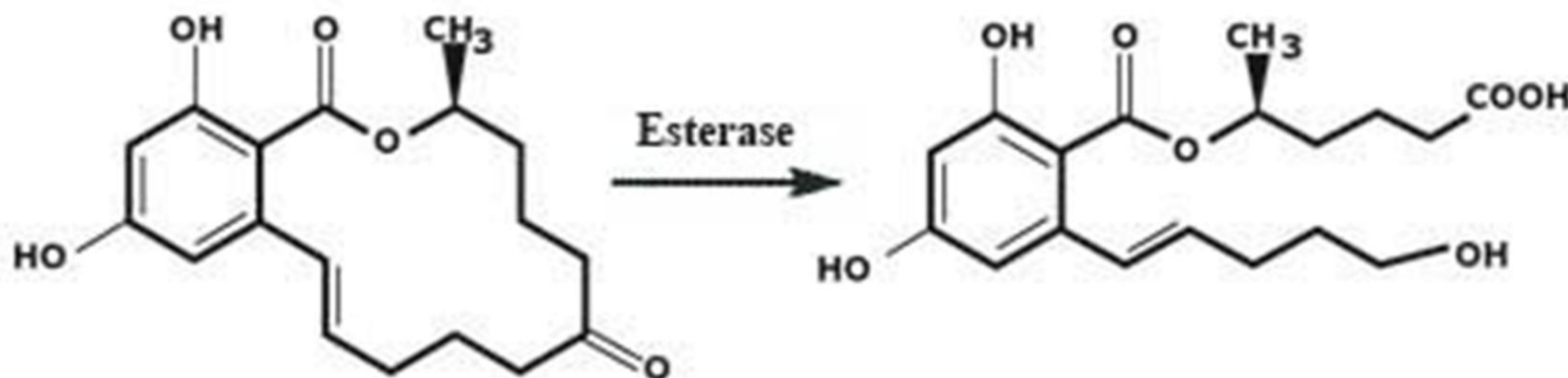


oligomannanes by their chemical structure, and esterification were able to bind up to 95% of Aflatoxins (Devegowda et al., 1996).



2-Enzymatic Biotransformation

Super Cerqual is enriched with Enzymatic
Complex “800”



Zearalenone

detoxified form

Thepax rich in chitinase enzyme

Doxal's THEPAX cells are treated by **Chitinase**, an enzyme which is able to reduce dramatically, their chitin content .

Chitinase enzyme has a specific action in detoxification of non polar mycotoxins specially **T-2 Toxin, and Zearalenone**.

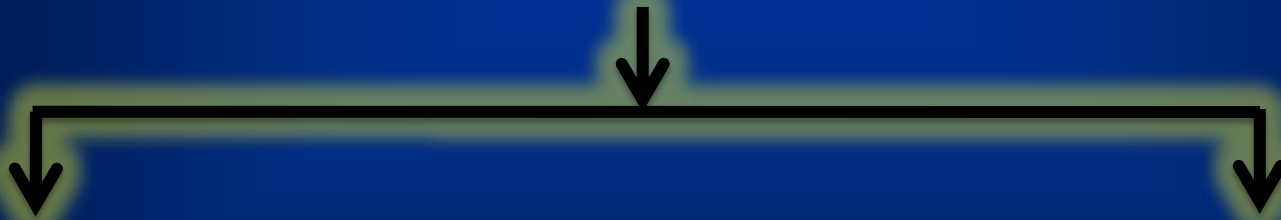
3-pH inhibition

The organic acid play important role in the prevention of mycotoxins absorption through the **lowering effect to the pH** of intestine.

The Thepax cell increasing the lactobacillus acidophilus 2.5 than normal , leading to increase lactic acid in the intestine resulting **lowering of pH** .

II-Efficient control of secondary complication Mycotoxins

Super cerqual able to control secondary bacterial infections associated with mycotoxins
e.g. Clostridia, Salmonella , and E.coli.



**1-Protected
Organic acids**

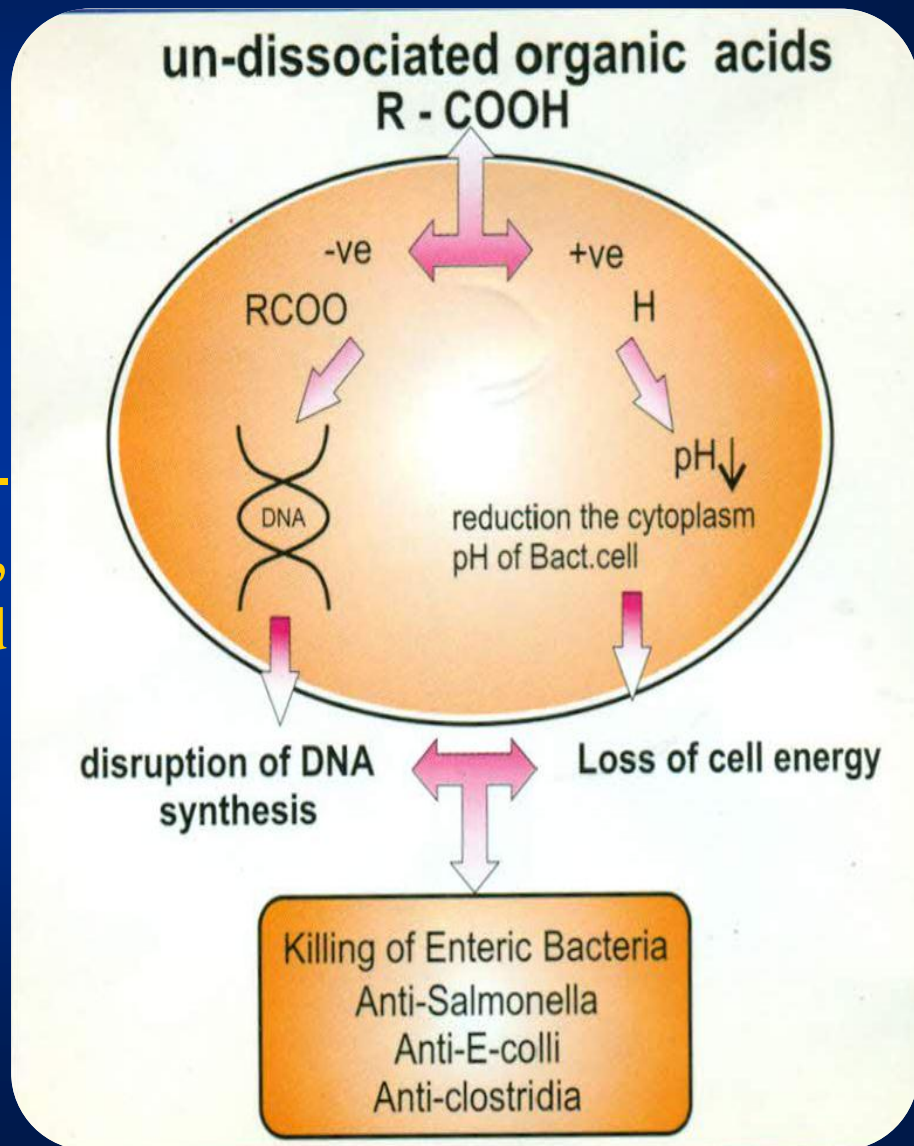
**2-Thepax
Saccharomyces Cervisea**

1-Protected Organic acids

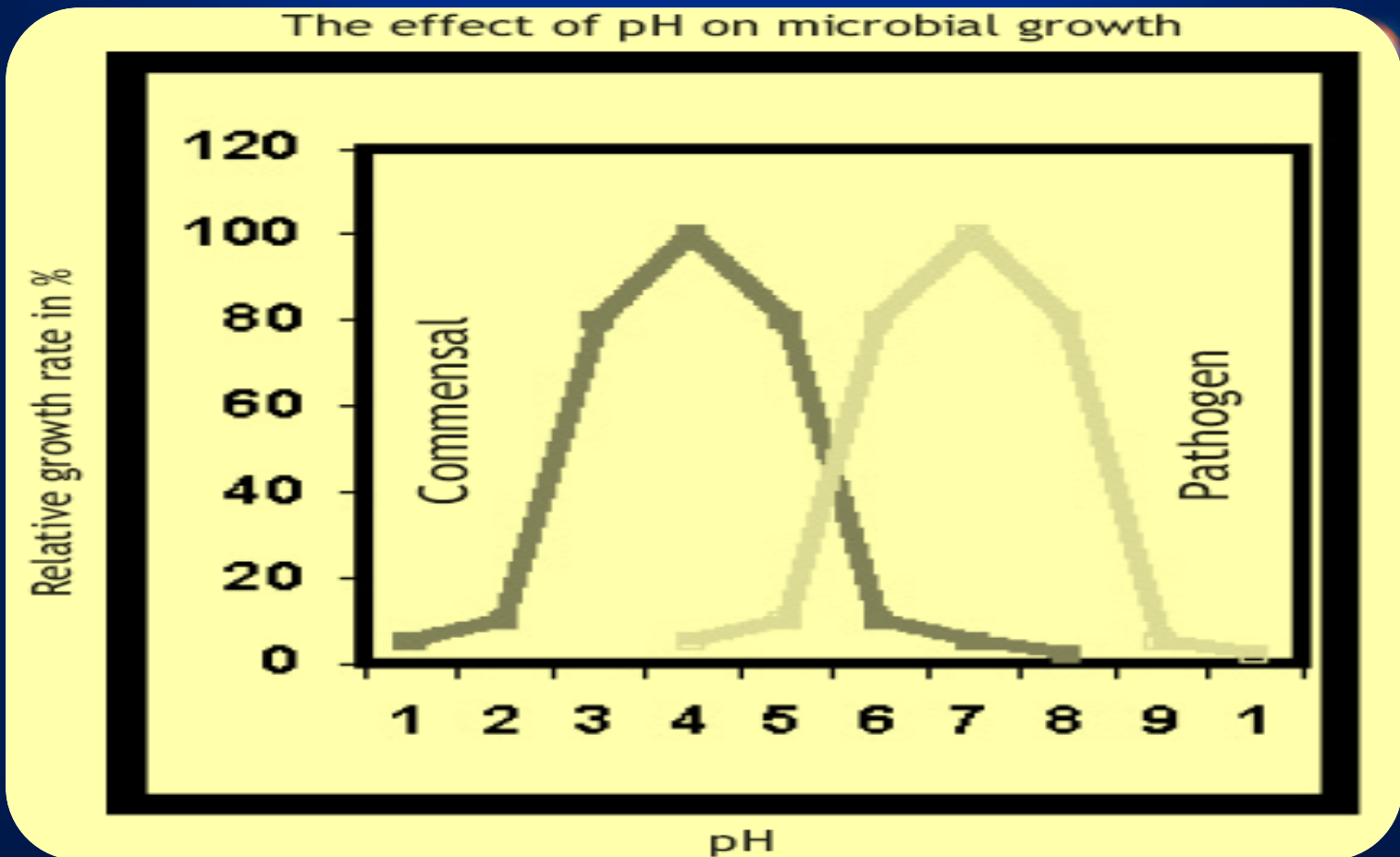
The organic acid penetrates the cell membrane of bacteria and inside the cell the acid dissociated into.....

Anions(- ve) of organic acids deactivate RNA transferase enzyme, which damage nucleic acid and death of m.o “bactericidal”

Proton (H⁺) decreases pH in the cell. The bacteria use its energy resources trying to remove the protons resulting death.



2-The organic acid play important role in the **lowering effect to the PH of intestine** that reflect on the incidence of infection with pathogenic bacteria.



2-Thepax Saccharomyces Cervisea

Thepax "Inactivated saccharomyces Cerevisiae Elypsoideus" **Chitin content, is about 60% less than the other four commercial yeasts**, as expected, due to the chitinase pre-treatment.

Doxal's THEPAX cells are treated by **Chitinase**, an enzyme which is able to reduce, dramatically, their chitin content. This increase the cell wall **flexibility**.

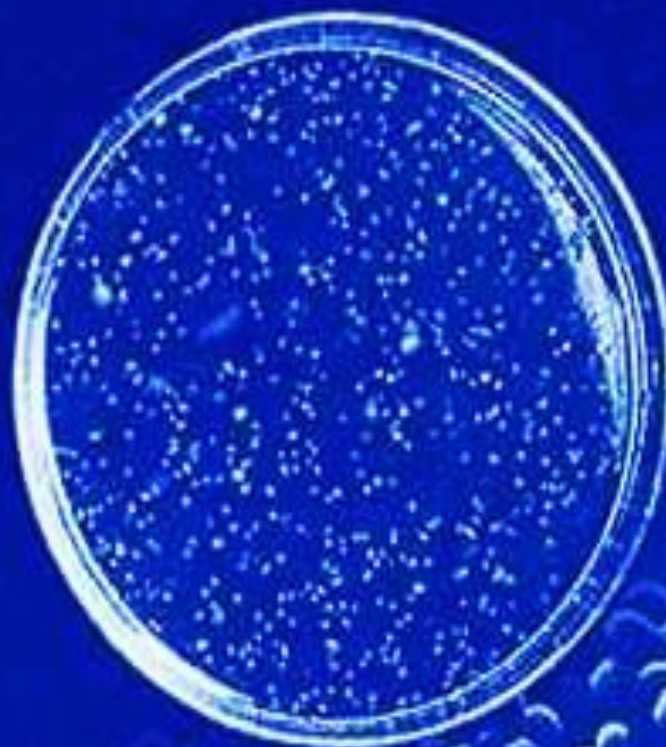
Doxal's THEPAX cells more digestible by poultry normal flora

THEPAX[®] potency

Feed without THEPAX



Feed with THEPAX



Super Cerqual Benefits

- 1- Effective control of Mycotoxins and Prophylaxis from their complication.**
- 2- Prevention of secondary bacterial infection that following the Mycotoxicosis.**
- 3- Effective protection of liver and Kidney from the effect of mycotoxins.**
- 4- Increasing the performance of Digestive system "Digestion and absorption of Nutrients".**
- 5- Activation of immune system helping to increase the immun response to vaccination**
- 6- Increasing productive performance" meat & eggs"**

Dose of Super Cerqual

Add 0.5 - 1 ml/ L drinking water for 2-3 days every week.

