

Naturally Derived Antimicrobial for Ethanol Production

IsoStab® lets you eliminate chemical antibiotics in your production system

IsoStab® is derived from natural weak organic acids found in the hops cone. It's the natural way to effectively control gram-positive bacteria in fermentation. So you can eliminate chemical antibiotics in your process, and in your distillers grains!

- Eliminates the need for chemical antibiotics and harsh chemicals.
- Effectively inhibits Lactic Acid Bacteria.
- You have no worries over the development of antibiotic-resistant bacteria.
- Increase your profits with higher value antibiotic-free co-products.
- IsoStab® has proven potential to increase ethanol yields.

IsoStab® Properties

- A naturally derived, food grade product with a long history of safe use.
- FDA and Kosher certified
- Thermally stable
- pH tolerant
- Easy and safe to use, handle and store.
- IsoStab® is cost effective to use.
- No effect on yeast activity or vitality.



IsoStab® results in higher value, antibiotic free DDGs.

How to use IsoStab®

- You can add IsoStab® directly into the propagation tank.
- You can also add IsoStab® in through the propagation mix tank.
- No additional preparation is required before use.

Packaging

- 20 kg (5 gallon) pails
- 200 kg (55 gallon) drums
- 1,000 kg totes

**Pump more profit per bushel...
with IsoStab®**

IsoStab® is proven effective

Ethanol production facilities across North America, as well as numerous scientific studies have proven that IsoStab® works as promised. These plants have eliminated the use of chemical antibiotics and produced more valuable co-products. In many cases plants have actually increased ethanol yield by using IsoStab® in combination with VitaHop® Silver fermentation enhancer.



IsoStab® has been proven effective in every type of ethanol operation.



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The natural secret behind IsoStab®

The hops cone has been used for centuries to provide flavor, aroma and preservation for beer. But hidden within that cone are compounds that have natural antimicrobial functionalities. BetaTec discovered a way to extract and isolate these compounds, and provide a product with bacteriostatic and bactericidal activity against gram-positive bacteria. The result is naturally derived IsoStab®.

IsoStab®

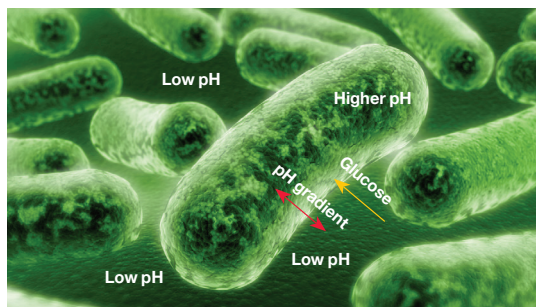
- Naturally derived.
- Safe.
- Effective.
- Proven.

It's the natural alternative to chemical antibiotics in your ethanol production system.

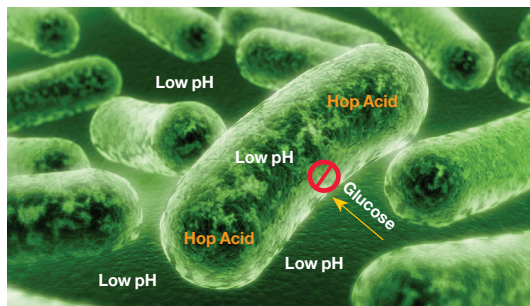


How IsoStab® works in ethanol production

IsoStab® inhibits a bacteria cell's ability to transfer glucose through the cell wall. They can't eat. They can't multiply. And they die. This occurs without the use of chemical antibiotics, and without the development of treatment-resistant bacteria.



Without IsoStab®, the pH differential between the surrounding liquid and the interior of the bacteria cell enables the transfer of Glucose into the cell. This is how the bacteria compete with the yeast for Glucose food, and thus inhibit your ethanol yield.



The natural hop acids in IsoStab® are absorbed by the bacteria cells, and serve to reduce the pH within the cells. This reduces the pH gradient across the cell wall, and thus inhibits the cell's ability to transfer Glucose across the cell membrane. This essentially starves the cell of its food, killing it and preventing competition with yeast for this nutrient. Bacteria starve. Yeast cells prosper. Ethanol yield benefits.

**Visit our ethanol-specific website:
www.BTHP.info**

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