

Member Profile

BetaTec Hop Products *By Shannon Gustafson*



*Bill Popa,
Ethanol Sales
Manager,
North America*

"For the last three years, BetaTec has been working to provide quality fermentation products to the ethanol industry in the form of natural hop products. "What sets us apart from others is our experience in fermentation."

Success begins in Yakima, Washington for this relative newcomer to the ethanol industry. Over the last three years, BetaTec Hop Products Inc., a part of John I. Haas, Inc. (a company with operations in the Yakima Valley), has become a leader in fermentation products in the ethanol industry. Nestled at the base of Mt. Adams, their endless fields of hops are ample illustration of their motto, "efficient by nature".

BetaTec Hop Products, Inc. is a global company specializing in the application of hops and hop-derived compounds for use in industries "beyond brewing". Their extensive product portfolio ranges from compounds that function as natural antibacterials, to flavor and functional ingredients for applications in fermentations, water treatment, agriculture, food, nutraceuticals, and more.

They are a wholly owned subsidiary of John I. Haas, Inc., a company that serves the brewing industry worldwide and is the world's largest leading grower, trader, and processor of hops and specialty hop products. All of those products begin with the hops grown in the Pacific Northwest of the United States.

For the last three years, BetaTec has been working to provide quality fermentation products to the ethanol industry in the form of natural hop products. "What sets us apart from others is our experience in fermentation," said Bill Popa, Ethanol Project Manager / Sales Manager, North America, referring to the 100-plus years of experience John I. Haas has in fermentation in the brewing industry.

Hops, or *Humulus lupulus*, is a wild plant that originated in Europe and Western Asia. They have been used in the brewing process of beer for over 1,000 years contributing flavor, aroma, and aiding in preservation. Today, hops are the primary ingredient in beer worldwide and are grown commercially in the moderate climate zones of Europe, North America, Australia, and China.

Inside the cone of a hop, which comes from the female hop flower, are small yellow globules called lupulin glands containing the key components of the hop, namely its acidic resins and essential oils. Compounds are made from these acids and essential oils, which are removed by carbon dioxide extraction, that offer bactericidal and bacteriostatic activity against gram-positive bacteria, which can harm ethanol yields.

BetaTec has two products it sells to the ethanol industry - IsoStab™ and LactoStab™ - both of which are patent-pending with patents anticipated by the end of this year. “IsoStab is the only all-natural product that controls gram-positive bacteria during fermentation,” Popa said.

For ethanol producers, this is an important consideration. Bacterial infections in distilleries can cause producers to see a decrease in yield. The possibility of infection exists anytime that sugar and water are found below 50 degrees Celsius. IsoStab™ and LactoStab™ can effectively prevent these infections from forming. The more these chances are reduced, the higher the ethanol yield.

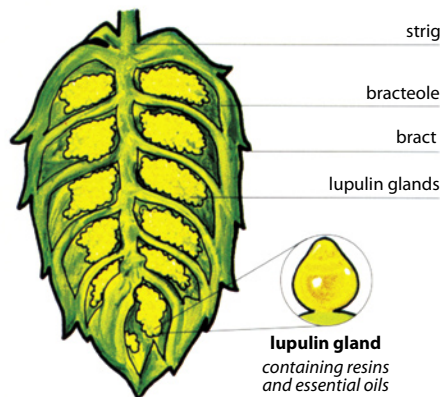
Many producers use antibiotics to control bacterial infections from occurring during ethanol production. Antibiotics can affect yeast vitality and performance, however, while hops are natural and do not affect yeast. IsoStab™ and LactoStab™ are selective, either inhibiting or killing gram-positive bacteria without doing any damage to the yeast.

IsoStab™ is a standardized solution of hop acids produced from CO₂ hop extract using an all-aqueous proprietary process. These acids are the natural bittering acids found in traditionally hopped beer. It acts as a natural antibacterial product when added to acidic fermentation processes. It naturally inhibits the growth of many gram-positive bacteria, particularly Lactobacillus and Pediococcus and is used to control the growth of lactic acid and acetic acid bacteria in fermentable sugar solutions.

There are a number of benefits of using IsoStab™ in Ethanol Production, including:

1. Stabilizes alcohol production
2. Controls lactic and acetic acid formation
3. Replaces the need for antibiotics
4. Enables DDGS to be “antibiotic free”
5. Does not “stress” yeast or impact vitality
6. Stable to heat and low pH
7. Cost effective
8. Natural food-grade product with a long history of safe usage
9. Safe, easy to use, and non-corrosive

Hop flower cross-section



The other product BetaTec offers to the ethanol industry is LactoStab™. LactoStab™ is an all natural food-grade product that can control bacteria growth in solutions containing fermentable sugars. It is heat, acid, and water stable, which makes it possible to add it to conversion tanks, mash streams, yeast propagators, and fermenters.

In addition to these products, BetaTec is “looking at new products and new technology all the time,” according to Popa. With their rich history in fermentation, BetaTec has made the logical transition into the ethanol industry, expanding into new markets and providing ethanol producers with a natural alternative.

For more information on BetaTec Hop Products, Inc. and their products, please contact Bill Popa, Ethanol Project Manager / Sales Manager, North America at (816) 509-0200. Bill has twenty years of sales experience in growing and servicing the specialty chemicals industry, including water treatment for boilers and cooling towers. He works from his home office in Kansas City, Missouri.

BetaTec also has offices in Yakima, Washington, where customer service orders and requests are handled by Judy Rose (509) 469-4039, and a corporate office and lab in Washington, DC where Sami Faour (202) 777-4830 handles technical services.

*Left: Close-up of hops plants ripening.
Right: A hops field in Washington.*

John I. Haas, Inc. Mission

To our customers:

To provide consistently high quality hop products, innovative value-added solutions, and technical expertise utilizing state-of-the-art processing and techniques to ensure full customer satisfaction.

To our suppliers:

To provide a basis of doing business with integrity and fairness.

To our employees:

To provide a safe and pleasant work environment while creating career opportunities that will be conducive for all to grow to their fullest potential.

To our shareholders:

To operate the Company on a sound financial basis of profitable growth and increasing shareholder value.

On the Web:

For more information about BetaTec Hop Products, visit www.betatechhopproducts.com

