

Across the globe, low-calorie brews are gaining ground on traditional beers. It is safe to say that this is not just a trend – light beer is here to stay. Attenuzyme® Flex helps make great-tasting light beer possible.

GOOD NEWS FOR BEER LOVERS AND BEER MAKERS

Attenuzyme Flex is Novozymes' solution to a rising demand for light beers. The fight against obesity has made consumers more conscious about their calorie intake, and they often turn to light and low-carb products whenever taste and appearance are not affected. In the US, half of the beer sold is light, and the market for light and low-calorie beer is expected to grow faster than the traditional beer market.

A new tool for brewmasters

As the latest addition to Novozymes' portfolio of enzymes for beer production, Attenuzyme Flex has been highly welcomed in breweries around the world. As in any other production, breweries are always in search of effective process control and improved economy, and enzymes are a natural solution to both of these issues.

"Compared to the first generation of Attenuzyme, Attenuzyme Flex is an optimized blend of enzyme activities that works synergistically with the naturally occurring amylases in the malt," says Ricardo Gerlack, Customer Solutions Brewing Scientist at Novozymes. "The combination of these enzyme activities provides a rapid and effective breakdown of the available starch into fermentable sugars."

Attenuzyme Flex is an all-in-one, single-dosage product containing a unique, patented pullulanase component that ensures a faster process and a more consistent performance. And best of all, Attenuzyme Flex performs optimally under standard mashing conditions and does not require any changes in the process.

Time and energy savings

Producing highly attenuated beer requires longer mashing times, which can decrease brewhouse capacity. Attenuzyme Flex makes it possible to shorten mashing times, providing an improved utilization of the brewhouse capacity.

When added at the beginning of the main mash, Attenuzyme Flex can shorten conversion time by up to 50% while still maintaining the desired attenuation. The optimized amount of enzyme used depends on the desired degree of attenuation, the mashing time, and the temperature. The shorter conversion makes it possible to produce a highly attenuated beer in the same amount of time as a standard beer. This results in a faster process, increased brewhouse capacity, and significant savings of both time and energy.

Attenuzyme® Flex makes it easy to produce great-tasting light beer that women enjoy.



▶▶ “Attenuzyme Flex allows breweries to realize a broad range of wort attenuation, from highly attenuated beers such as low-calorie and light beers to those requiring only fine attenuation adjustments,” says Søren Lund, Regional Marketing Manager for Brewing at Novozymes. “The sugar profile is more favorable with a lower glucose-to-maltose ratio compared to wort produced with regular glucoamylase-based enzymes, especially for fine attenuation adjustments. A better sugar profile means better yeast performance, which results in a more desirable flavor profile.”

Attenuzyme Flex is inactivated during wort boiling and is considered a processing aid. Furthermore, the reduction of enzyme load per brew also reduces problems with wort filtration and hot break removal, which is often seen with a highly saccharified mash.

Beer for the ladies

Low-calorie and low-carb brews generally appeal to women, and it will be interesting to see if these healthier beers will inspire more women to choose a beer over a mixed drink or glass of wine. Market experts find it likely that new and more targeted marketing approaches will focus on women in the years to come – a major change in a market that has traditionally been solely directed towards men.

Once again a Novozymes product contributes to the greater good. Healthier beers with fewer calories and reduced energy usage are the result when breweries change to Attenuzyme Flex. And it is good to see that consumers are ready for the change, too. ■

FOR MORE INFORMATION
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“Light beers are here to stay, and Attenuzyme® Flex can help brewers meet this consumer need,” says Søren Lund, Regional Marketing Manager for Brewing at Novozymes.



MEETING

Novozymes has selected Blair, Nebraska, as the location for its new USD 80–100 million production facility. The plant will produce enzymes for existing corn-based fuel ethanol and later, enzymes for cellulosic ethanol production.



A sketch of the new enzyme plant which is planned to be completed in 2010.

The new facility will be located on a 30-acre property at the Biorefinery Campus in Blair, approximately 25 miles north of Omaha, Nebraska. Novozymes expects to break ground in 2008 and start operations in late 2010.

The search begins

“The search for the perfect location started 18 months ago,” says Per Olesen, Vice President and project chairman at Novozymes. “Our objective was to find the most economical and efficient area from which to supply our American fuel ethanol customers. To begin with we didn’t limit

