

## Clearing the haze: Elevating Beer Stabilisation with DELTABREW® Pure

Chill haze can be a frustrating obstacle for brewers to deliver a clear and visually appealing beer that maintains it's quality during storage and transportation which is crucial for avoiding negative consumer perception and influencing purchasing decisions. This common quality issue occurs when beer turns cloudy or hazy at low temperatures due to the interaction of proteins and polyphenols.

While PVPP, a synthetic polymer fining agent, is often used to remove the phenols, enzymatic treatment is a natural and customizable solution with minimal impact on taste and aroma.



With a naturally occurring secondary activity, it eases filtration after fermentation by significantly reducing beta glucan contents (Figure 2). Forcing tests of beer treated with DELTABREW® Pure show a high reliability for haze removal and improved stability compared to treatment with PVPP. (Figure 1)

With DELTABREW Pure®, you can effectively prevent unwanted haze formation, ensuring crystal clear beer with high colloidal stability while optimizing economics of your brewing process.

#### Features

- Active and stable at lower fermentation temperatures: 4-20° C and pH 3.0-5.5
- No negative impact on foam stability
- Addition during fermentation, maturation or dosage split between these processes
- 1.0 to 3.0 mL per hl of beer, depending on the P degree
- Competitive cost in use

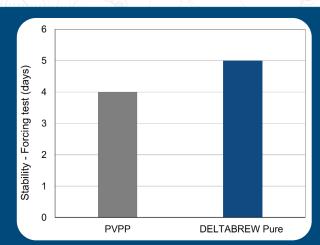


Figure 1: Comparison of Forcing tests of beer treated with PVPP and DELTABREW® Pure (1.5 g/hL): Stability of beer in days is increased by 25% by using DELTABREW® Pure.

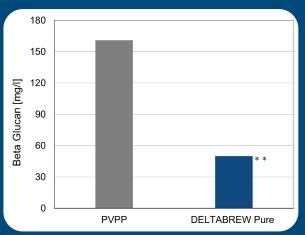


Figure 2: Comparison of  $\beta$ -glucan levels of beer after treatment with PVPP and DELTABREW® Pure (1.5 g/hL):  $\beta$ -glucan levels of beer treated with DELTABREW® Pure are very low.

Trials and analysis according to MEBAK performed by Versuchs- & Lehranstalt für Brauerei in Berlin (VLB) e.V.

\* \* Below detection limit



# Enzymatic treatment for beer stabilisation has become standard in the beer industry.



#### **Chill Haze Prevention**

Clarity enhancement by reduction of haze-forming particles



#### **Effective Beer Stabilisation**

Maintain colloidal stability during storage and transportation



#### Non-GM

Naturally derived with broad consumer acceptance



#### **Foam Stability**

Optimised composition for clarity while maintaining foam stability



#### Improved Filtration

Secondary activities facilitate filtration

### Transform Your Brewing Process with DELTABREW® Enzymes

In today's dynamic beer landscape, brewers encounter a myriad of new trends and opportunities. To excel in this ever-evolving industry, it's crucial to embrace the diverse nature of raw materials and brewing techniques. Key ingredients like malted barley, as well as adjuncts such as unmalted barley and wheat, are central to the process.

Enzymes are expertly incorporated during mashing and fermentation to elevate your beer production in various ways. They boost the creation of fermentable sugars, streamline mash filtration, accelerate the maturation process, and, for those seeking low-calorie brews, reduce carbohydrate content in the final product.

Join us on a journey to unlock the full potential of your craft, and let our enzymes be your partners in brewing innovation.



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