

ENZYMES

# DEHAZE

VEGAN FRIENDLY. OPTIMAL CLARITY.

With an increasing number of people moving away from food and drink containing gluten, DeHaze easily enables any brewer to provide a great range of gluten free beers for consumers to enjoy.

## What is DeHaze?

DeHaze is a proline-specific oligopeptidase which offers a great solution to brewers for both gluten removal and prevention of the formation of protein-polyphenol complexes.

## Facilitates The Production of Gluten-Free Beer

By breaking down gluten proteins into harmless peptides, this enzyme takes your beer below detectable gluten levels without compromising on taste or foam.

## Enhanced Stabilisation

DeHaze selectively targets haze sensitive proteins, protecting your beer from the formation of chill haze during (adequate) storage. Your beer will maintain its clarity and quality for longer, without affecting other desirable parameters, such as foam!

## DID YOU KNOW? ?

Colloidal stability can be further enhanced by combining DeHaze with PVPP, silica or other enzymes. For tailored guidance, contact our technical team on [techsupport@murphyandson.co.uk](mailto:techsupport@murphyandson.co.uk) for expert advice and recommendations.

## TOP TIP ☆

Optimal addition rate is determined by grist composition (barley, wheat, etc.), gravity and shelf-life required. Please contact our technical team for further advice.



## BENEFITS



- Decreases gluten content to undetectable levels
- Targets only haze sensitive proteins
- Enhances beer shelf life to 12 months and beyond
- Improves colloidal stability
- Energy saving brewing by shortening chilled conditioning time

## APPLICATION



### How Much To Add

1 – 5 g/hl  
1.6–8.2 g/bbl (UK)  
1.2–5.9 g/bbl (US)

### When To Use

Dose into cold pitching wort at the start of fermentation.

### Activity Range

pH optimum: 4.0–5.0

## STORAGE



### Temperature

Recommended storage temperature: 0–10°C  
Do not freeze.

### Location

Cool, sealed, and away from sunlight.

### Shelf Life

24 months from date of manufacture at recommended storage conditions

## How Does It Work?

Murphy's DeHaze is a prolyl oligopeptidase – an enzyme that selectively hydrolyses internal peptide bonds, primarily at the carboxyl site, within proline-rich proteins. By targeting these bonds, the enzyme enhances the colloidal stability of beer, particularly in the context of haze-active protein-polyphenol interactions (Fig.1). Moreover, the chain of amino acids constituting the gluten protein is enzymatically broken down into harmless peptides. This enzymatic action effectively reduces gluten levels to below the limit of detection (Fig. 2) and permissible thresholds\*, enabling the classification of your beer as gluten-free when dosed appropriately.



- Proline    ● Other Amino Acids
- Polyphenol
- Haze-active Protein

Fig.1: The use of Murphy's DeHaze improves the colloidal stability of your beer.

## DID YOU KNOW?

For beers to be labelled as gluten free in the UK, they must be below 20ppm of gluten as determined by R5 ELISA competitive testing carried out in a UKAS accredited laboratory.

Murphy & Son are proud to offer this service, for more information please contact:  
[laboratory@murphyandson.co.uk](mailto:laboratory@murphyandson.co.uk)

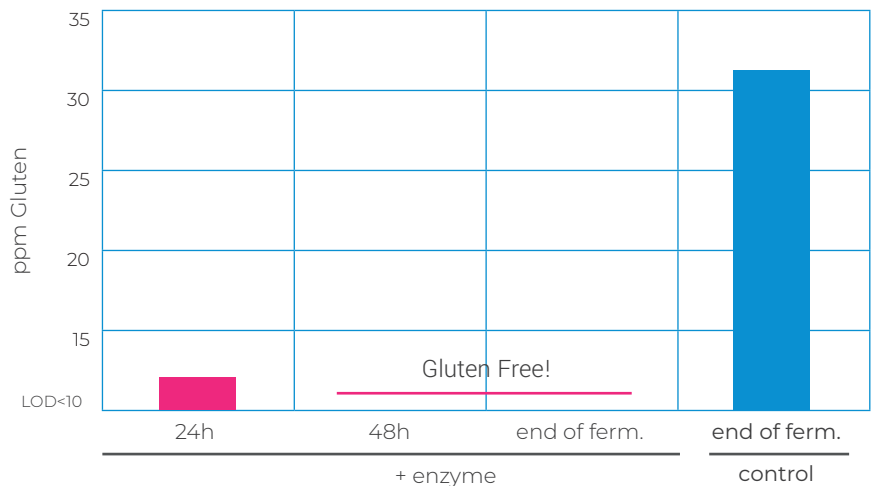


Fig.2: Gluten levels determined using ELISA R5 competitive test in industrially brewed beers fermented with or without (control) the addition of Murphy's DeHaze.



## WANT TO KNOW MORE? GET IN TOUCH

Head to our website: [www.gladfieldmalt.co.nz](http://www.gladfieldmalt.co.nz)

Or contact Gabi: [gabi@gladfieldmalt.co.nz](mailto:gabi@gladfieldmalt.co.nz) / 027 392 7543