



DIAZYME® NOLO-FAQS

Q. What are NOLO beers?

A. A segment of beers with low alcohol content and alcohol-free. This concept varies depending on the region and local legislation. Normally, "low alcohol" is between 1.2% and 4% ABV, and "alcohol-free" is <0.5% ABV. Italy is a market where the "alcohol-free" limit is more generous, i.e., 1.2% ABV. This offers craft breweries a unique opportunity to produce excellent NoLo beers.

Q. Why should I add low-alcohol or alcohol-free beers to my range?

A. NoLo beers are significantly outperforming the rest of the market, with a growth rate almost double that of other segments. This trend is likely to continue. Diazyme® NOLO offers the potential to create new, flavorful beers in this segment that are organoleptically superior to those currently on the market.

Q. I don't like using chemicals/aids. Isn't there a more natural way to produce NoLo beers?

A. Diazyme® NOLO is an enzyme, and enzymes are proteins created by living organisms, so there's nothing more natural! Enzymes are essential for brewing in both malt and yeast, and although it's possible to produce NoLo beers without using "exogenous" enzymes as technological aids, Diazyme® NOLO added to the wort creates unique compounds called IMO (isomalto-oligosaccharides), which are non-fermentable and contribute to the body and mouthfeel, producing a more stable NoLo beer. With optimized use of Diazyme® NOLO, the RDF (Real Degree of Fermentation) can be reduced to below 40%.

Q. How does Diazyme® NOLO work?

A. Diazyme® NOLO is added to the wort during mashing, and as the normal wort reactions occur, the fermentable sugars are converted into a non-fermentable form. These sugars are called IMOs, isomalto-oligosaccharides, which have low relative sweetness, a low glycemic index, and are considered prebiotics. Panose is the main IMO created during mashing with Diazyme® NOLO.

Q. How should I dose Diazyme® NOLO to achieve the desired result?

A. To achieve a real attenuation of 40%, the maximum dosage of 500 g of Diazyme® NOLO per 100 kg of grist should be applied, and a 60-minute mash should be performed.

Q. Which mashing program should I use?



A. For low-alcohol beers, higher mashing temperatures are normally used to promote limit dextrins. Since Diazyme® NOLO depends on the malt's B-amylase to create maltose, lower mashing temperatures should be used. Single infusion at 63-66°C is recommended. This means that a well-modified malt with low gelatinization temperatures will be preferred.

Q. Can it be used for other beers?

A. Yes, why not! There might be opportunities to get creative and create new "full-bodied beers." For example, a beer with the flavor of an Imperial Stout but with "standard ABV."

Q. Does the activity continue? How is the enzyme denatured/deactivated?

A. Diazyme® NOLO is designed to work at typical mashing temperatures of 63-68°C. The enzyme begins to denature at 70°C and denatures rapidly at >80°C. As with malt enzymes, there will be no activity after boiling, and the sugar spectrum will be fixed.

Q. Do I need to use a maltose-negative yeast?

A. Not necessarily. Thanks to the reduced wort fermentability achieved using Diazyme® NOLO, it is possible to inoculate a standard yeast strain and achieve excellent results on NoLo beers.

Q. What about microbial and food safety?

A. As with all beer production, hygiene control is a critical component, and the brewer must follow regulations to produce safe beverages for the consumer. For any low-alcohol beer production, hygiene is even more important, since Diazyme® NOLO produces non-fermentable sugars. The tools available to the brewer vary enormously, but standard tests that examine heat storage to force any potential deterioration should be available to everyone.

Q. Is Diazyme® NOLO a GMO?

A. Diazyme® NOLO is not a GMO, does not contain GMOs, and is classified as a technological aid. It is produced by fermentation of microorganisms optimized through modern biotechnologies that are not present in the final product.

Q. Is Diazyme® NOLO expensive?

A. Diazyme® NOLO allows brewers to produce beers without costly investments in equipment. Since raw material costs are generally much lower, the cost of the enzyme can be easily integrated into production costs to produce profitable beers. In many countries, the savings from taxation can also be very significant.



Q. Who can I contact if I have questions?

A. Obviously, our technical staff! Italian: davide.bombardier@mr-malt.it, English + German: adam.johnson@mr-malt.it