

PRIMER
DESIGN



Arvada, Colorado, USA



Beer Spoilage Detection Made Easy

genesig® Easy Beer Spoilage Detection Kits

Spoilage bacteria can form as part of the natural decay in the brewing process and can result in wasted product and loss of profit. Detecting these bacteria in yeast stocks or in brewing equipment is the fastest and easiest way to avoid a problem.

The genesig Easy Beer Spoilage Detection Kits enable the quick and early detection of bacteria, which is the best method to avoid beer and beverage spoilage.

Detection kits for

- **NEW!** *Saccharomyces cerevisiae* variety diastaticus
- All *Pectinatus* species
- All *Pediococcus* species
- Hop resistant *Lactobacillus* and *Pediococcus* species

Contact DIEC America:

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NEW KIT! *Saccharomyces cerevisiae* variety diastaticus

Saccharomyces cerevisiae variety diastaticus is a spoilage yeast in beer. Its ability for super-attenuation causes increased carbon dioxide concentrations, beer gushing and potential bottle explosion, as well as changes in flavor, sedimentation and increased turbidity.

All Pectinatus species

Pectinatus bacteria cause beer spoilage by producing off flavors and turbidity. Detection of these bacteria is often carried out using traditional microbiology. However, this is complicated by the strict anaerobic conditions and lengthy incubation times required for their cultivation. Consequently, there is a need for rapid detection methods such as qPCR.

All Pediococcus species

Pediococcus is a very common spoilage bacteria often considered one of the most difficult types of bacteria to remove from an infected brewery. Pediococci cause high acidity, buttery aroma and inhibit yeast growth, which results in decreased fermentation rates.

Hop resistant Lactobacillus and Pediococcus species

Hop resistant genes horA and horC, when found in the species lactobacillus and pediococcus, enable these lactic acid producing bacteria to grow in beer. This results in beer with bitter and unpleasant flavors.

The genesig q16: The easiest, most affordable qPCR instrument on the market

The genesig Easy qPCR detection kits are specially optimised for the genesig q16. We have developed the genesig q16, the world's smallest and very portable molecular testing platform. The genesig q16 is cost effective, easy to use, and provides high quality results in just over 90 minutes. It can test up to 14 samples and 2 controls at a time with fast data analysis. This platform was designed to make DNA/RNA testing easy for anyone across all industries.



Campden BRI Evaluation

The genesig q16 and kits have been evaluated by Campden BRI - the UK's largest independent organization and validation body supporting the food and drinks industry worldwide.

Open qPCR Platform Kits

We also offer the genesig Standard and Advanced qPCR detection kits which are open qPCR platform format, for use on any qPCR instrument. To see our full range of kits, please visit our website and if you still cannot find a specific pathogen of interest then we can make new kits OnDemand.

genesig Easy DNA/RNA Extraction Kits

To accompany our genesig qPCR detection kits, we offer genesig Easy DNA/RNA Extraction Kits which extract DNA and RNA from virtually any sample using magnetic bead technology.

KIT FEATURES

- Sample to result <3 hours
- Sensitive – detect less than 10 bacteria
- Easy to use for all user experience levels
- Supplied lyophilised with no cold chain shipping

Traditional Microbiology vs Real-Time PCR

The simple implementation of in-house testing results in the protection of the brewery's brand from product recalls, and also includes benefits such as reducing the risk of further contamination, thus protecting revenue streams.

There are clear benefits to using real-time PCR for beer spoilage detection, as seen in the tables below.

TRADITIONAL MICROBIOLOGY

TIME TO RESULT : FEW DAYS

- Between 48-72 hrs incubation
- Long sample processing time
- Lack of specific results
- Strong possibility of False Positive

REAL-TIME PCR

TIME TO RESULT : <3 HOURS

- Sample to result under <3 hours
- Fast and accurate microbial detection
- Very specific identification
- Highly sensitive down to 10 copies

BEER SPOILAGE DETECTION KITS

PRODUCT DESCRIPTION	KIT SIZE	CATALOGUE NUMBER
genesig Easy Kit for <i>S.diastaticus</i>	50 reactions	Z-Path-S.diastaticus-EASY
genesig Easy Kit for all Pectinatus species	50 reactions	Z-Path-Pectinatus_spp-EASY
genesig Easy Kit for all Pediococcus species	50 reactions	Z-Path-Pediococcus_spp-EASY
genesig Easy Kit for hop resistant Lactobacillus and Pediococcus species	50 reactions	Z-Path-HorA/HorC-EASY
genesig Easy DNA/RNA Extraction Kit	50 reactions	Z-genesigEASY-EK

ABOUT US

DIEC America is the official beer industry partner of Primerdesign™ who provides the World's broadest menu of >550 genesig® real-time PCR detection kits, and fast development of new assays on demand. Additionally, it designs, validates and manufactures qPCR kits, Precision® Master Mixes, controls, lyophilised reagents, and qPCR instruments.

GET IN TOUCH

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