

foodproof® Beer Screening Kits

During production, contamination of beer can be recognized by unwanted turbidity due to microorganisms, pH changes, undesired flavor changes and protein flocculation. Often, the appearance of beer-spoilage bacteria results in a loss of whole batches of beer. By using the ready-to-use foodproof® Beer Screening Kits and LyoKits, the most troublesome spoilage bacteria of the genera *Lactobacillus*, *Pediococcus*, *Megasphaera* and *Pectinatus* can be detected and identified at an early stage in the production process, and appropriate measures can be initiated to minimize product loss. The assays are based on real-time PCR, which is well-established in the brewing and beverage industry as a highly sensitive and specific detection method.

The **foodproof Beer Screening 1 and 2 LyoKit** detects more than 30 beer spoilage bacteria. Additionally, the kits can detect the hop tolerance genes *horA* and *horC* that are correlated with the ability for lactic acid bacteria to grow in beer. Beer Screening 1 is designed to identify *Lactobacillus brevis*. Beer Screening 2 differentiates between the lactic acid bacteria, *Lactobacillus* and *Pediococcus*, and the obligate anaerobic bacteria, *Pectinatus* and *Megasphaera*, in two different channels.

Using the **foodproof Beer Screening Kit**, 31 of the most troublesome spoilage bacteria can be detected in a single rapid test. The most important representatives of these genera, such as *Lactobacillus brevis*, *Lactobacillus lindneri*, *Pediococcus damnosus*, *Pediococcus inopinatus* and *Megasphaera cerevisiae* can also be identified by melting curve analysis in the same test.

Safe: Prevention of false-negative results with internal control and prevention of carry-over contamination using Uracil-N-Glycosylase.

Cost-Saving: Screening of multiple bacterial beer spoilers for an affordable price.

Fast: 48-72 h to results with < 40 min of hands-on time.

Easy: Convenient, complete solution including DNA extraction and real-time PCR analysis.

Sensitive: Validated to detect 1-10 cfu/mL.

Wide Detection Spectrum

Detection of more than 30 relevant Beer Spoilage Organisms of the Genera:

Lactobacillus
Pediococcus
Pectinatus
Megasphaera

Identification of

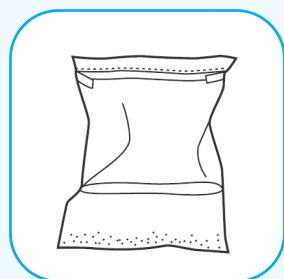
Lactobacillus brevis and other important beer spoiling bacteria

Hop tolerance genes
horA and *horC*

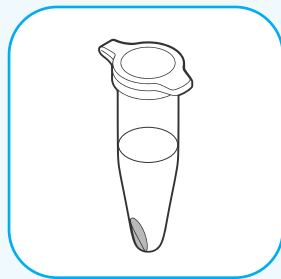
Matrices

Beer, yeast samples, pitching yeast, production samples and environmental samples.

Workflow

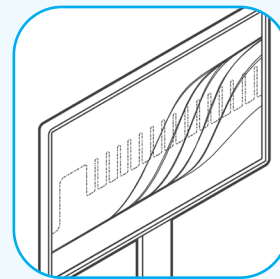


Enrichment



DNA Extraction

Duration depending on protocol
and number of samples



Real-Time PCR

60 - 110 min

DNA Extraction Kits

Manual

foodproof StarPrep® Two Kit (high sensitivity)
KIT 2301 77

foodproof StarPrep Three Kit (high convenience)
KIT 2301 87

Tests

192 (42 ml)

120 - 360 (21 ml)

LyoKits

Fast & Convenient

Lyophilized, prefilled reaction mix reduces hands-on time and minimizes contamination risks.

Easy Storage & Safe Transportation

Ships at room temperature, store at 2 °C to 8 °C.

Real-Time PCR Kits

foodproof Beer Screening 1 LyoKit

Beer-spoilage bacteria, *Lactobacillus brevis*, hop-tolerance related genes
KIT 2300 71 (LP), KIT 2300 72 (RP), KIT 2300 73 (DP)

foodproof Beer Screening 2 LyoKit

Beer-spoiling *Lactobacillus* and *Pediococcus*, beer-spoiling anaerobic *Pectinatus* and *Megasphaera*, hop-tolerance related genes
KIT 2300 74 (LP), KIT 2300 75 (RP), KIT 2300 76 (DP)

foodproof Beer Screening Kit (Hybridization Probes)

Beer-spoilage bacteria, additional identification by melting curve
KIT 2300 66

Tests

96

96

96

Instrument Compatibility

Different Profile (DP):

e.g., Dualo 32®

Low Profile (LP):

e.g., LightCycler® 480, LightCycler® 96, AriaMx, Bio-Rad CFX96™, Applied Biosystems™ 7500 Fast, QuantStudio™

Regular Profile (RP):

e.g., Mx3005P

Other cyclers on request.



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