

foodproof®

Beer Screening 1 LyoKit Ready Reference Guide

Revision A, November 2023

Product No. KIT230073 (DP)

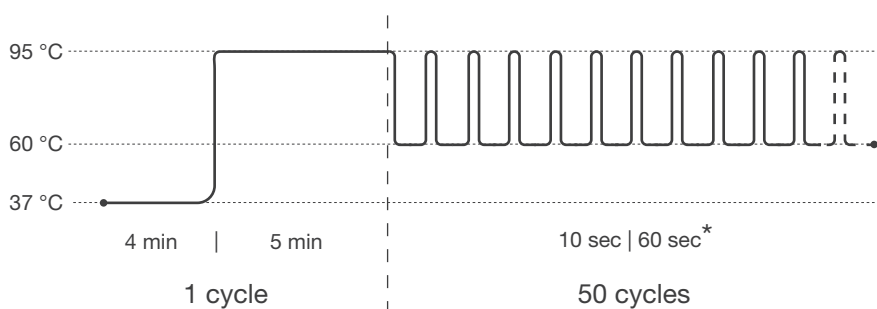
PCR kit for screening of >30 beer spoilage bacteria of the genera *Lactobacillus*, *Pediococcus*, *Pectinatus* and *Megasphaera*, including identification of *L. brevis* and detection of hop-tolerance genes *horA* and *horC* on a real-time PCR cycler.

Before starting, it is strongly recommended to read the entire product manual available on our website.

PROGRAM SETUP

Program your real-time PCR instrument before setting up the PCR reactions. Select the following dyes:

- FAM (beer-spoilage bacteria), HEX (*Lactobacillus brevis*), ROX (hop-tolerance related genes) and ATTO 490LS (Internal Control).



Pre-incubation: 1 cycle

Step 1: 37 °C for 4 min

Step 2: 95 °C for 5 min

Amplification: 50 cycles

Step 1 : 95 °C for 10 sec

Step 2*: 60 °C for 60 sec

* Fluorescence detection

For the Dualo 32® Beverage real-time PCR instrument, please open the software, click on 'New', and select the respective template file. Template files can be added by clicking on 'Add' in the 'Select template file' window.

DATA INTERPRETATION

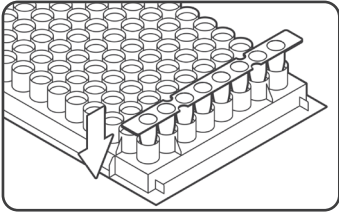
Verify results of positive (Control Template) and negative (H₂O) controls, before interpreting the sample results. Always compare samples to positive and negative controls. Review data from each dye and interpret results as described in the table.

FAM	HEX	ROX	ATTO 490LS	Result Interpretation
+	+	+	+ or -	Positive for beer-spoilage bacteria, <i>L. brevis</i> *, hop-tolerance related genes
+	-	+	+ or -	Positive for beer-spoilage bacteria, hop-tolerance related genes
+	+	-	+ or -	Positive for beer-spoilage bacteria, <i>L. brevis</i> *
+	-	-	+ or -	Positive for beer-spoilage bacteria
-	-	+	+ or -	Positive for hop-tolerance related genes
-	-	-	+	Negative for beer-spoilage bacteria, hop-tolerance related genes
-	-	-	-	Invalid

*including *Lactobacillus* sp. DSM 6265 ("*L. brevisimilis*")

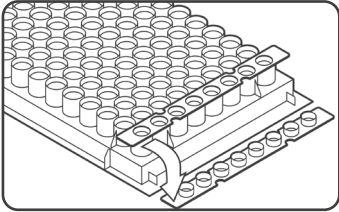
PREPARATION OF THE PCR MIX

Take appropriate precautions to prevent contamination, e.g., by using filter tips and wearing gloves.



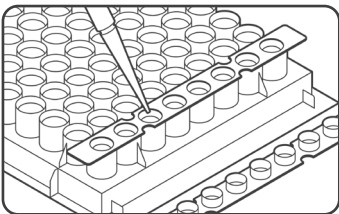
1. PLACE STRIPS IN RACK

Take needed number of PCR tube strips out of aluminum bag.
Important: close bag tightly afterwards. Place strips in a suitable PCR tube rack.
If needed, gently tap the tubes to move the lyophilized pellets to the bottom of all tubes.



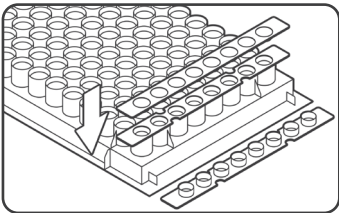
2. DECAP

Immediately before filling, carefully open strips and discard caps.
Do not leave open longer than necessary.



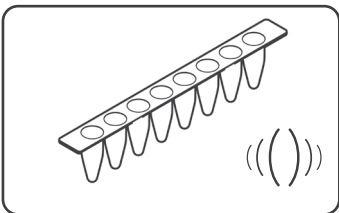
3. ADD SAMPLES AND CONTROLS

Pipette 25 μ L of samples, Negative Control (colorless cap) or Control Template (purple cap) into respective wells.
If using less volume, add PCR-grade H₂O to reach 25 μ L.



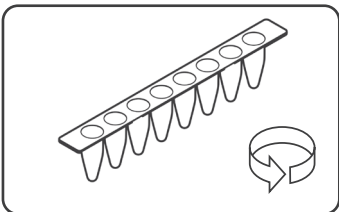
4. SEAL

Carefully seal the tubes with the provided 8-cap strips.



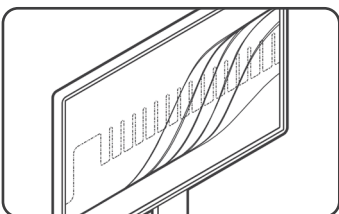
5. MIX

Resuspend pellet after sealing by mixing thoroughly.
Alternatively, resuspend pellet by pipetting up and down multiple times in Step 3.



6. CENTRIFUGE

Briefly spin strips, e.g., 5 seconds at 500 - 1,000 x g, in a suitable centrifuge.



7. START REAL-TIME PCR RUN

Cycle samples as described above.
Place tubes in a vertical, balanced order into the cycler, e.g., two strips can be placed in the first and last column.