

Beverage microbiology

Raising standards, with every drop

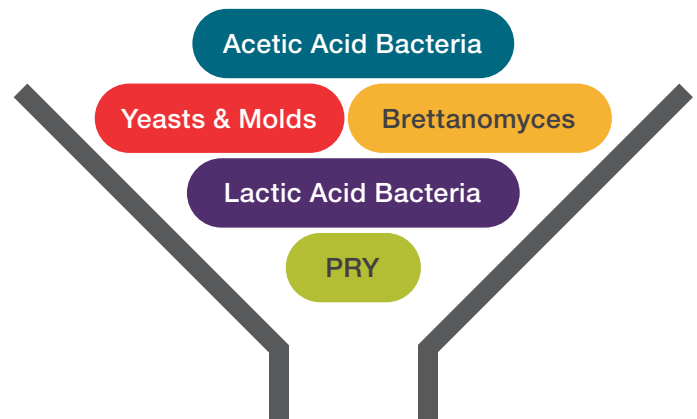
Thermo Scientific™ SureTect™ PCR solutions for
microbiology testing laboratories

A rapid solution for beverage producers to detect and differentiate spoilage yeasts

Microbial spoilage in beverages is primarily caused by yeasts, molds, and bacteria such as lactic acid and acetic acid species, many of which can survive in acidic, low-oxygen, and preservative-rich environments. These microorganisms can alter flavor, aroma, clarity, and carbonation, leading to sour, musty, or off-tastes, turbidity, and gas production that compromise product quality and shelf life.

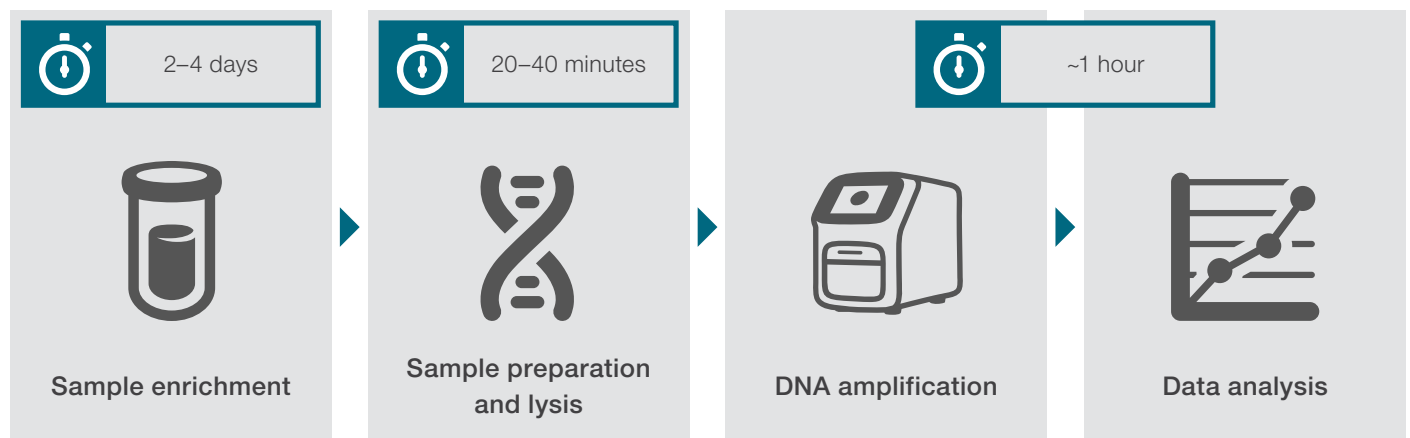
Common spoilers include *Saccharomyces cerevisiae*, *Zygosaccharomyces bailii*, *Brettanomyces bruxellensis*, and *Lactobacillus* and *Acetobacter* species, which are frequently linked to spoilage in juices, soft drinks, beer, wine, and functional beverages. Detecting their presence is essential for effective contamination control and for maintaining consistency, safety, and consumer confidence in beverage production.

Designed with a leading beverage bottling provider, the Thermo Scientific™ SureTect™ solutions for beverages offer industry-verified and tested rapid detection of the most common spoilage microorganisms.



Simplify your laboratory workflow for detection and differentiation

The SureTect PCR system and assays enable a simple, automatable, harmonized workflow with results available in 2 to 4 days, enabling faster product release or contamination control response.

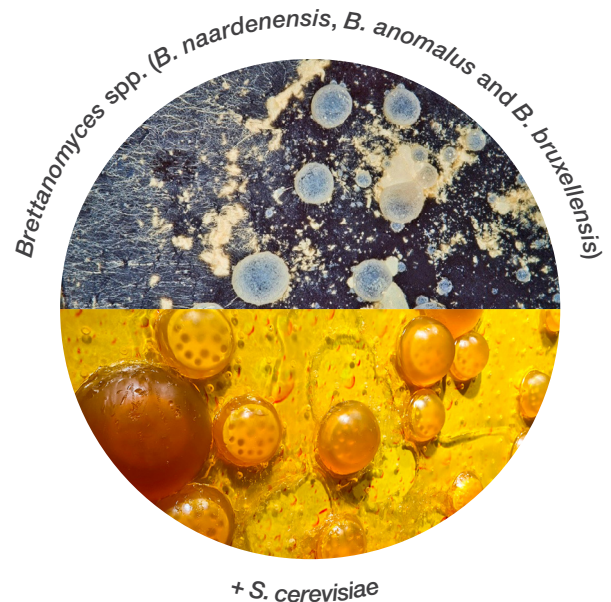


A quicker path to enabling effective *Brettanomyces* spp. and *S. cerevisiae* detection and differentiation for environmental samples.

Brettanomyces is responsible for the presence of 4-Ethylphenol in juice and high sugar beverages; its presence may affect *Saccharomyces cerevisiae* fermentation and can impact the color, odor, and taste of the produced beverages.

The SureTect *Brettanomyces* spp. and *S. cerevisiae* Multiplex PCR Assay allows for rapid detection and differentiation of the yeast spoilage strains of concern for beverage manufacturers.

This optimized automatable solution combines speed and performance in an easy-to-use and cost-effective platform, giving robust results that you can always trust.



The SureTect *Brettanomyces* spp. and *S. cerevisiae* Multiplex PCR Assay kit includes:

- Lysis Reagent 1, pre-filled into 96-well plate
- Lysis Reagent 3
- Lysis Reagent 3 Buffer
- SureTect *Brettanomyces* spp. and *S. cerevisiae* PCR Assay Tubes
- 96-well pierceable seals (3 seals per kit)
- SureTect flat, optical PCR Caps



Efficiently detect the most important spoilage micro-organism families for beverage, including over 100 strains, in a single test

Through continued partnership with leading manufacturing and bottling companies in the beverage industry, we are proud to introduce the only solution in the market to detect the four most important spoilage micro-organism families for beverage, including over 100 strains, in one PCR reaction.

The SureTect™ Beverage Spoilage Multiplex PCR Assay offers an easy-to-use molecular method, providing actionable results in 4 days enabling you to streamline your risk-based product release strategies.

Spoilage organism species detected by the kit:

Group	Species
Yeast and molds	Most yeast and mold species (general fungal target)
Brettanomyces spp.	<i>Brettanomyces</i> species including <i>B. naardenensis</i> , <i>B. anomalus</i> , <i>B. bruxellensis</i>
Preservative Resistant Yeast (PRY)	<i>Zygosaccharomyces</i> species including <i>Z. baillii</i> , <i>Z. parabailii</i> , <i>Z. bisphorous</i> , <i>Z. lentus</i> , <i>Z. rouxii</i> , <i>Z. pseudorouxii</i>
	<i>Saccharomyces cerevisiae</i>
	<i>Companilactobacillus mindensis</i>
Lactic Acid Bacteria (LAB)	<i>Lactocaseibacillus paracasei</i>
	<i>Lactiplantibacillus</i> species including <i>L. plantarum</i> , <i>L. argentoratensis</i>
	<i>Liquorilactobacillus</i> species including <i>L. cacaonum</i> , <i>L. hordei</i> , <i>L. satsumensis</i> , <i>L. mali</i> , <i>L. oeni</i>
Acetic Acid Bacteria (AAB)	<i>Asaia</i> spp. including <i>A. bogorensis</i> , <i>A. krungthepensis</i> , <i>A. platycodi</i> , <i>A. prunellae</i> , <i>A. lannensis</i> , <i>A. siamensis</i>
	<i>Acetobacter</i> species including <i>A. aceti</i> , <i>A. oryzifermentas</i> , <i>A. pomorum</i> , <i>A. pasterianus</i> , <i>A. tropicalis</i> , <i>A. ascendens</i>
	<i>Gluconacetobacter</i> species including <i>G. liquefaciens</i> , <i>G. dulcium</i>
	<i>Komagataebacter xylinus</i>



The SureTect Beverage Spoilage Multiplex PCR Assay kit, 96 tests, includes:

Contents	Amount	Storage
Lysis Plus Tubes (LPT, clear liquid)	12 strips of 8 tubes 180 µL each	2–8°C
Thermo Scientific™ 96-Well Pierceable Seals	3 sheets	Room temperature (23±5°C)
Lysis Supplement (LS, blue liquid)	1 tube	4°C
Beverage Spoilage Multiplex PCR Tubes	12 strips of 8 tubes 1 pellet each	2–8°C Protect from light
PCR Caps	12 strips of 8 caps	Room temperature (23±5°C)



The Thermo Scientific SureTest PCR Solutions for microbiology testing laboratories

Simple



- ✓ Easy-to-use and simple workflow
- ✓ Pre-dispensed lysis reagents and lyophilized PCR reagents
- ✓ Automatic lysis cycle with very few pipetting steps

Fast and Flexible



- ✓ Fast screening and differentiation of *Brettanomyces* spp. and *S. cerevisiae* in a single PCR test
- ✓ Rapid detection for early actions and high confidence in production
- ✓ Test up to 96 samples in each run
- ✓ Choice of pierceable seals or caps
- ✓ Open PCR platforms

Smart



- ✓ Highly specific assay includes the three main species of *Brettanomyces*: *B. naardenensis*, *B. anomalus* and *B. bruxellensis*
- ✓ Multiplex PCR reduces cost and hands-on time compared with running separate tests for each target
- ✓ Optimized workflow with three pierceable seals to reduce risk of cross-contamination
- ✓ Intuitive, user-friendly software delivers reliable results, with no subjective interpretation
- ✓ Actionable data supports fast decisions in a complex product supply chain
- ✓ Internal positive control in every assay for complete confidence in results
- ✓ Solutions for environmental testing and for finished products



Speed

Results 4 days faster than conventional methods



Efficiency

Reduced hands-on time and improved productivity



Sustainability

Reduce your plastic waste and energy use



Brand Protection

Reduced risk of recalls and product scraps



SureTect Automation Workflow

With the Thermo Scientific™ SureTect™ Automation Workflow, you can take your beverage testing to the next level with automated lysis and PCR preparation.

Utilizing the CyBio™ Felix* Instrument, the automated workflow and rapid setup allows you to reduce hands-on time whilst increasing the accuracy of your testing, enabling your technicians to focus on other tasks.

With a user-friendly interface and innovative yet compact dual deck design, the CyBio Felix instrument enables efficient, accurate lysis and PCR preparation whilst saving valuable bench space.

The instrument's flexible programs and precise pipetting accuracy ensure maximum efficiency and reproducibility.



Time saving

- Fully automated lysis & PCR setup
- Rapid 5-minute setup time for loading reagents



Flexible

- Choose from full or partial plate processing
- Automate lysis, PCR setup or the complete workflow



Accurate and traceable

- Enhanced pipetting accuracy, minimizing risk of human error
- Barcoded sample entry for full traceability



Control

- Control your consumable costs and wastage with the Flex Package option, allowing you to use the Head R 96 Pipetting head as either a 96-channel pipetting or 8-channel pipetting
- Be confident in your processes with the decontamination unit



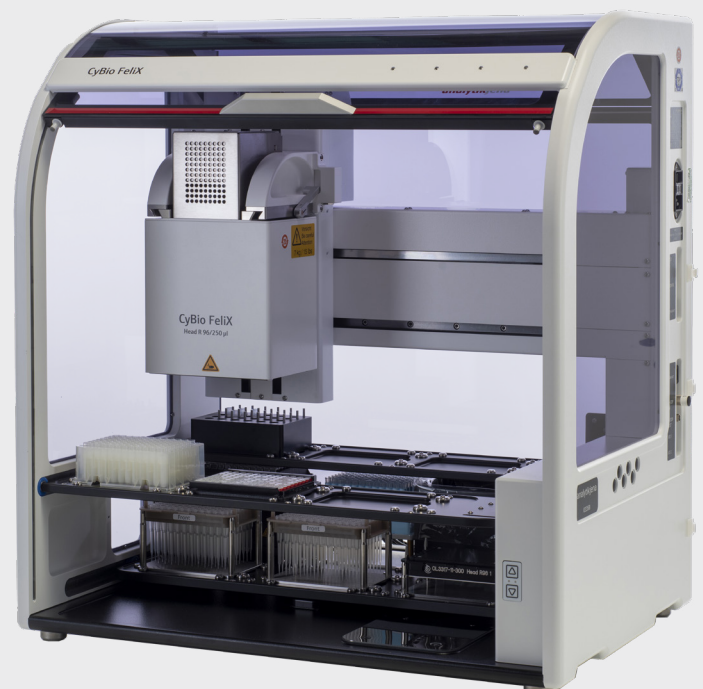
Intuitive software

- User-friendly interface
- Pre-programmed runs for quick setup

*CyBio Felix is a trademark of Analytik Jena GmbH.

Key benefits of the CyBio™ Felix Instrument

- Ready-to-use, specific SureTect protocols
- Integrated heating and cooling block
- Unique 2-level deck
- Comprehensive service packages
- Compact design:
 - Dimensions: 650 x 450 x 700 mm
 - Weight: 58 kg



Applied Biosystems SimpliAmp Thermal Cycler

Utilize the Applied Biosystems™ SimpliAmp™ Thermal Cycler in the SureTect *Brettanomyces* spp. and *S. cerevisiae* Multiplex PCR Assay method for PCR sample preparation, enabling workflow efficiency and reduced handling steps.

The SimpliAmp Thermal Cycler is an easy-to-use, compact, and accurate thermal cycler designed to fit every lab's essential PCR workflow.

- Large, easy-to-use color touchscreen for easy programming and quick status checks
- VeriFlex™ Block—Three independent temperature zones for PCR optimization
- Cloud-enabled—Conveniently access your instrument anytime, anywhere with the Connect Platform
- Compact design—Helps save valuable bench space



Applied Biosystems QuantStudio 5 Food Safety Real-Time PCR System

The SureTect *Brettanomyces* spp. and *S. cerevisiae* Multiplex PCR Assay is designed to run on the Applied Biosystems™ QuantStudio™ 5 Food Safety Real-Time PCR system.

The QuantStudio 5 Food Safety PCR system is a high-performance benchtop platform, combining ease-of-use and system connectivity with powerful options that enable maximum data utility and control.

Benefit from the flexibility of a 6-channel, 96-well, cloud-enabled open platform suitable for running our full range of PCR solutions for food safety, authenticity, and quality testing.

- Intuitive and easy-to-use for all levels of experience—touchscreen usability, allowing you to stay connected to your data easily
- Multiplex with ease—up to six excitation and six emission filters offer 21 different color combinations, allowing a broad range of detection chemistries and maximum multiplexing
- Get up and running quickly—factory-calibrated for accuracy, quick installation, and immediate use; preoptimized protocol templates help minimize training for new users
- Maximize benchtop space—compact instrument can be configured as stand-alone or with a computer
- Open instrument—due to the open capability of the instrument, additional custom assays can be developed for manufacturers to support quality and safety testing programs.



Automated reporting with Thermo Scientific RapidFinder Analysis Software

An integral part of the SureTect *Brettanomyces* spp. and *S.cerevisiae* Assay workflow, the Thermo Scientific™ RapidFinder™ Analysis Software, is a graphical, easy-to-use tool for food and environmental testing labs to optimize their yeast detection workflow with the QuantStudio 5 Food Safety PCR System.

RapidFinder Analysis Software enables:

- Intuitive sample set up
- Flexible plate layout including automatic or customizable options
- Pre-set, optimized thermal cycling conditions per target
- Automatically generates color coded results (presence or absence of the target)
- Reports the detection of *Brettanomyces* separately from *S. cerevisiae*



Ordering information

Description		Order code
SureTect Beverage spoilage Multiplex PCR Assay		A57289
SureTect <i>Brettanomyces</i> spp. and <i>S. cerevisiae</i> Multiplex PCR Assay		A59289
Thermo Scientific SureTect Starter Pack		A56898
Applied Biosystems SimpliAmp™ Thermal Cycler		A24811
Automation Platform	Automation Platform Head R 96	A66295
SureTect Automation Flex Package*	• 96-Head 8-Channel Adapter	A49008
	• 40 mm Height Adapter	
	• Waste Box	
	• 37 mm Support x 2	
SureTect Automation Software	Downloadable at thermofisher.com/molecular-microbiology-software	A66373
Laptop	Laptop 3551 W10IOT19 RC	A49006
SureTect Automation Starter Pack	Automation Starter Pack:	A59905
	• Automation Lysis Tray	A59019
	• Automation PCR Adapter	A59018
	• Thermo Scientific™ 96-Well PCR Base	A55330
	• QuantStudio™ 5 Strip Plate Tray	A55332
	• Thermo Scientific™ PCR Strip Cutting Tool	A55329
Filter Tips	• Thermo Scientific™ PCR Capping Tool	A55327
	Filter Tips for SureTect Automation 96 (12 boxes of 96 filter tips)	A66298
	Filter Tips for SureTect Automation 8/96 (10 boxes of 96 filter tips)	A59033
UV-Decontamination Unit	Standalone UV unit for SureTect Automation	A49009
Sample Enrichment Tubes	4800 samples	A59902
Enrichment Tubes Caps	4800 samples	A59903
Waste Bags	Waste Bags for SureTect Automation (50 bags)	A59034
Protective Plate	Protective plate for SureTect Automation (50 plates)	A66299
QuantStudio 5 Food Safety PCR System (96-well, 0.1 mL block) with laptop and RapidFinder Analysis Software		A36328
QuantStudio 5 Food Safety PCR System (96-well, 0.1 mL block) with desktop and RapidFinder Analysis Software		A36320

 To find out more contact your representative or visit thermofisher.com/beverage-microbiology

thermo scientific