



# Viability Kit

## INVISIBLE SENTINEL'S LIVE/DEAD PCR KIT



### THE CHALLENGE

A significant challenge for quality managers employing molecular analysis is differentiating between live and dead positive PCR results. Invisible Sentinel's Viability Kit allows brewers to interpret true risk from dead cells or DNA with a simple workflow and specialized reagents.

### THE SCIENCE

VIABILITY PCR is a powerful technology for the sensitive and rapid detection of viable microorganisms. Unlike time-consuming culturing methods, the IS VIABILITY application provides the speed, sensitivity and specificity you rely on from the IS beer spoiler detection portfolio, plus quantifiable viability. And because no culturing is required, you can even detect viable but not culturable (VBNC) cells.

The proprietary VIABILITY reagents employ photoreactive dyes that are cell membrane-impermeable, leaving only dead cells in the sample susceptible to DNA modification. Once covalently attached to the DNA in the IS PhotoLysis Device, the dead DNA is prevented from amplification in the subsequent PCR cycle.



### The Value of Viability

#### FEATURES

<b>FAST</b>	less than 10 minutes hands-on time
<b>EASY</b>	workflow involving only simple liquid transfers prior to PCR
<b>COMPATIBLE</b>	with IS veriFLOW end-point and veriPRO RT-PCR beer kits

#### BENEFITS

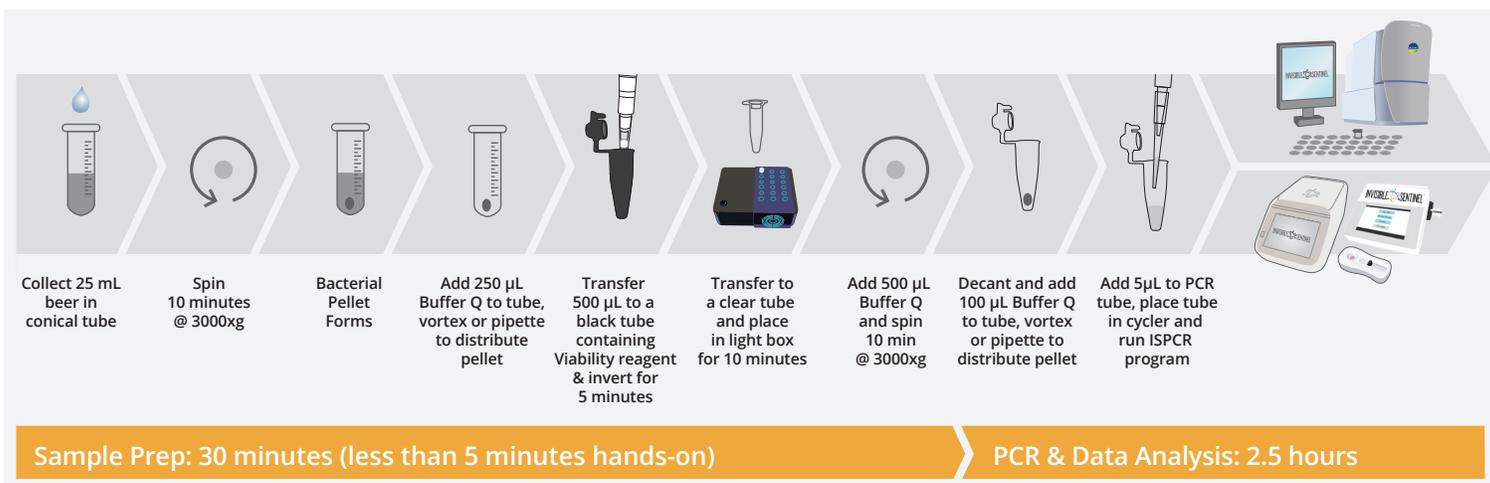
<b>VALIDATE</b>	pasteurization on known positive samples
<b>OPTIMIZE</b>	PU's to salvage flavor and maximize shelf-life of artisanal brands
<b>AVOID</b>	convoluted results stemming from heavy, dead bio loads in aggressively dry-hopped products or fruit beer analysis
<b>DETECT</b>	VBNC's that can lead to false negatives on traditional micro methods



"We wanted to make sure our pasteurization process worked as quickly as possible. Using traditional plating methods we would have needed to run the pasteurizer, plate all our samples and wait nearly a week to ensure it was successful with the

knowledge that if we saw growth we would have to do the same thing over again. With the VIABILITY kits we were able to get same day results and start packaging much sooner."

— Matt Fulcher, QA/QC Manager,  
Rogue Ales & Spirits



## BREWERY APPLICATIONS

Originally designed for post-pasteurized sampling, the IS VIABILITY treatment can help verify successful tunnel/flash pasteurization, and aid breweries in optimizing the appropriate PU needed to minimize lost flavors and maximize shelf-life, while still killing unwanted microbes.

Beer styles are constantly evolving and increased dry-hopping and fruiting rates are becoming the norm. Breweries utilizing cold side ingredient additions at Fermentation and Bright tank have found value in interpreting PCR results triggered from carryover DNA derived from agricultural ingredients that may typically

possess higher levels of spoilage DNA. Using the Viability Kit allows brewers to definitively know if either living or dead spoiler DNA was introduced at a particular process point from a simple ingredient addition.

Catalog No.	Item
ISTC003	IS PhotoLysis Device
IS1065	Viability Kit (24 tests, includes Buffer Q)
ISTC005	Mini tube rotator



**For more information or to place an order, please contact Invisible Sentinel at 215.966.6118 or [www.invisiblesentinel.com](http://www.invisiblesentinel.com)**

Invisible Sentinel, a global molecular solutions company, is dedicated to providing first-in-class microbial detection tools. The company's core technology, Veriflow, is a patented, game-changing platform that integrates molecular diagnostics, antibody design, and immunoassays. Veriflow technology is AOAC International Certified for foodborne pathogen detection, and is used globally by food manufacturers, 3rd party testing labs, and premium wineries along with craft breweries.

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