

PRODUCT INSERT

Instrument Compatibility:

Cellometer™ X2 and
Spectrum 10X

ViaStain™ Yeast Kit for Live/Dead Concentration

Part number:	CSK-0102-2mL	CSK-0102-10mL
Volume:	2 mL	10 mL

Storage: 2 to 8 °C

Description

The ViaStain™ Yeast Kit for Live/Dead Concentration enables the user to quantitatively distinguish live and dead yeast in pure cultures and in cultures containing debris such as corn mash using the Cellometer system. The kit contains a solution of the green-fluorescent nucleic acid stain, acridine orange, and the red-fluorescent nucleic acid stain, propidium iodide, and a dilution buffer. Propidium iodide is a membrane exclusion dye that only enters cells/yeast with compromised membranes while acridine orange penetrates all cells/yeast in a population. When both dyes are present in the nucleus, propidium iodide causes a reduction in acridine orange fluorescence by fluorescence resonance energy transfer (FRET). As a result, yeast with intact membranes stain fluorescent green and are counted as live, whereas yeast with compromised membranes only stain fluorescent red and are counted as dead when using the Cellometer system.

Materials Supplied

Reagents	Kit	Catalog number	Number of Tests
Yeast Live/Dead Staining Solution (Component A) Yeast Dilution Buffer (Component B)	ViaStain Yeast Kit for Live/Dead Concentration	CSK-0102-2mL	100 Tests
		CSK-0102-10mL	500 Tests

Materials Required

- Microcentrifuge tube
- Pipette and pipette tips
- Buffer solution (optional, for brewing yeast)
- Water (for corn mash)
- Cellometer counting slides (Cat. # SD100 or PD100)
- Cellometer X2 or Spectrum 10x (with Fluorescent Optics Modules S1-534-470 and S1-655-527)

Brewing Yeast Sample Preparation

- Using yeast from the *fermentation tank*:
 1. Dilute yeast sample ~10-50-fold in a buffer solution or yeast dilution buffer.
NOTE: Dilute to a concentration of $1-2 \times 10^6$ cells/mL.
- Using yeast from *slurry*:
 1. Dilute yeast sample ~100-200-fold in a buffer solution or yeast dilution buffer.
NOTE: Dilute to a concentration of $1-2 \times 10^6$ cells/mL.

Corn Mash Yeast Sample Preparation (for Biofuel)

1. Dilute corn mash sample 10-fold (by weight) in water and mix well.
2. Allow corn mash debris in diluted sample to settle for 30 sec.

Staining Procedure for Brewing Yeast or Corn Mash Yeast

1. Pipette 10 μ L of diluted yeast into a microcentrifuge tube.
NOTE: If using corn mash, avoid the large debris in the mixture.
2. Add 10 μ L of yeast dilution buffer to microcentrifuge tube and mix well by pipetting up and down 3 times.
3. Add 20 μ L ViaStain™ Yeast Live / Dead Cell staining solution to microcentrifuge tube and mix well by pipetting up and down 3 times.
4. Incubate the stained sample for 1-2 min at room temperature.
5. Pipette sample up and down 3 times to mix and then load 20 μ L into a counting chamber.
NOTE: If using SD100 slides, peel plastic film off both sides before loading
6. Place loaded slide on a Kimwipe® and wait 1 min before inserting sample into instrument to allow sample to settle in the chamber.
7. Select the appropriate assay type for yeast AOPI viability measurement.
8. Preview bright-field and fluorescent images.
9. Count.

Storage and Handling

Store the Yeast Dilution Buffer and the Yeast Live / Dead Staining Solution at 2 to 8 °C protected from light. The ViaStain™ Yeast Dilution Buffer is a buffer at high pH; safety precautions must be taken when handling the solution. Please consult the Safety Data Sheet for more safety information, found on www.revivity.com/cellcountingreagents.

Warranty

This product is for RESEARCH USE ONLY and is not approved for diagnostic or therapeutic use. The product is warranted to meet the specifications outlined in the Certificate of Analysis when stored and used according to the manufacturer's instructions. No other warranty, expressed or implied (such as merchantability, fitness for a particular purpose, or non-infringement), is granted. Warranty is valid until the expiration date stated on the product label.

Warranty will be void if product is stored incorrectly, the recommended protocol is not followed, or the product is used for a different application.

Ordering Information / Support

When ordering with a Purchase Order:

E-mail a copy of the order to Cellc-sales@revvity.com

For online orders, please visit:

<https://www.revvity.com/cellcountingreagents>

For support, e-mail USCAN.service@revvity.com



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