BD™ Cell Viability Kit

Microbial Viability Measurements on the BD Accuri™ C6 Flow Cytometer

Features

- Enumeration of live and dead bacteria, yeast, and other microbes
- Improved discrimination of microbes from debris
- Compatible with the easy-to-use BD Accuri™ C6 flow cytometer

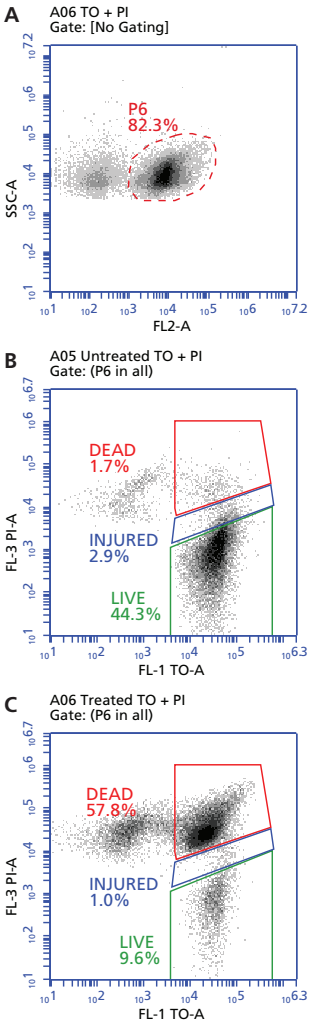

Figure 1. Live/dead discrimination of *E. coli* using the BD Cell Viability Kit.

E. coli cells were grown in LB broth overnight and treated with Conflikt® Detergent Disinfectant (1%) at room temperature for 5 minutes to induce cell death. The treated and untreated samples were stained with the BD Cell Viability Kit (Cat. No. 349483) and acquired on a BD Accuri C6 for 30 seconds on the Fast flow rate (66 µL/min) with SSC-H threshold = 10,000 to exclude debris.

Results: A. Cells were initially gated on an FL2-A vs SSC-A plot as described in the product insert sheet. **B, C.** Simultaneous TO and PI staining allows distinction among live (TO^+PI^-), dead (TO^+PI^+), and injured (TO^+PI^{int}) cell populations, revealing increased cell injury and death in the treated sample as expected. The TO^-PI^+ population was excluded from the analysis as debris.

The BD™ Cell Viability kit provides an easy-to-use dye combination that allows researchers to distinguish live and dead cell populations by flow cytometry. Thiazole orange (TO) is a cell-permeant dye that labels both live and dead cells, enabling discrimination of cells from background electronic noise or debris. Propidium iodide (PI) is impermeable to healthy cells with intact membranes, but permeates cells with compromised membranes such as dead cells. When used in combination, these dyes provide a rapid, simple method to distinguish live and dead bacteria, yeast, or eukaryotic cells.

The BD Accuri C6 personal flow cytometer brings microbiology applications to your benchtop. The system is easy to use, simple to maintain, and affordable. The BD Accuri C6 is equipped with a blue laser, a red laser, two light scatter detectors, and four fluorescence detectors. Compact design, fixed alignment, and pre-optimized detector settings result in a system that is simple to use, and a non-pressurized fluidics system enables kinetic measurements in real time. For walkaway convenience, the optional BD CSampler™ accessory offers automated sampling from 24-tube racks or multiwell plates.

The BD Cell Viability kit provides a simple, two-color method to monitor microbial cell viability on the BD Accuri C6 flow cytometer. The rapid protocol enables microbial quantitation and live/dead discrimination in research applications that require close monitoring of cell growth, such as bioprocess monitoring, water analysis, and molecular microbiology.

Ordering Information

Description	Quantity	Number of Tests	Cat. No.
BD™ Cell Viability Kit containing			
Thiazole orange: 42 µmol/L in dimethyl sulfoxide (DMSO)	500 µL	100 tests	**349483**
Propidium iodide: 4.3 mmol/L in water	500 µL		

Visit **bdbiosciences.com** for more information.

23-14687-00

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