

BD Accuri™ C6 Eawag Water Quality Template

Intact and damaged bacteria counts on the BD Accuri™ C6 Flow Cytometer

Features

Preconfigured software template to enumerate intact and damaged bacteria in drinking water and other samples on the BD Accuri C6

Excellent discrimination of bacteria from debris

Enables quick and easy setup and analysis using the BD Accuri C6

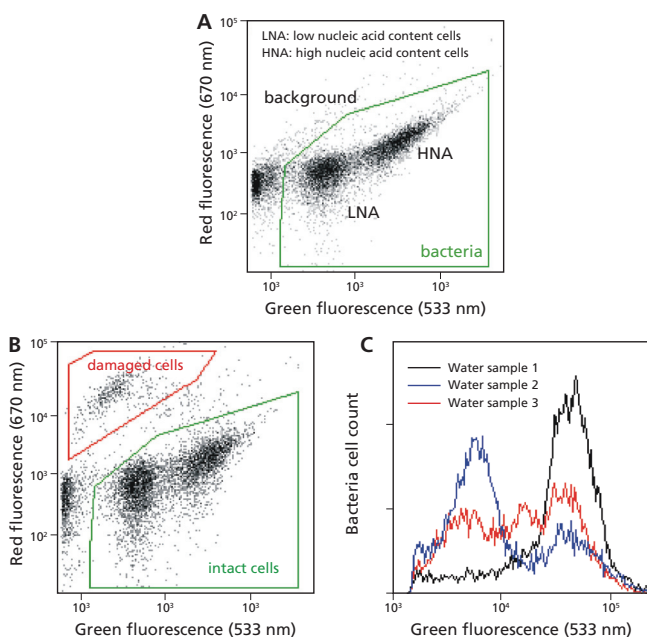


Figure 1. Water quality analysis using the Eawag water quality template on the BD Accuri C6.

Drinking water samples were stained according to the Eawag protocol, acquired on a BD Accuri C6 using the Eawag water quality template, and analyzed using BD Accuri™ C6 software. **A.** When a sample is stained with SYBR® Green I, all bacteria appear within the template's single, fixed gate, while noise and debris are excluded. **B.** When the sample is co-stained with SYBR® Green I and propidium iodide (PI), damaged bacteria are shifted out of the gate, leaving only viable bacteria within. **C.** Each water sample generates a unique flow cytometric fingerprint.

Data courtesy of Frederik Hammes, Eawag Department of Environmental Microbiology, Dübendorf, Switzerland.

The BD Accuri™ C6 Eawag Water Quality Template* simplifies the enumeration of intact and damaged bacteria in drinking water samples on the BD Accuri™ C6 flow cytometer. The software template includes a predefined workspace, markers, regions, gates, and parameter names for quick and easy setup and analysis.

Figure 1 shows data on the BD Accuri C6 using the software template.

Using nucleic acid dyes, flow cytometry can quantitate microbes and discriminate them from debris much more rapidly than plate methods. SYBR® Green I, which preferentially stains double-stranded DNA, is well suited for staining bacteria in water samples for flow cytometric analysis. Propidium iodide (PI) can be added to differentiate live and damaged bacterial cells. PI is impermeable to healthy cells with intact membranes, but permeates cells with compromised membranes such as dead cells.

Easy to use, simple to maintain, and affordable, the BD Accuri C6 personal flow cytometer is equipped with a blue laser, a red laser, two light scatter detectors, and four fluorescence detectors. Compact and rugged design, fixed alignment, and pre-optimized detector settings make the system simple to use and transportable into the field. A nonpressurized fluidics system automatically calculates absolute cell counts and concentrations per microliter, and enables kinetic measurements in real time. For walkaway convenience, the optional BD CSampler™ accessory offers automated sampling from 24-tube racks or multiwell plates.

For a detailed discussion of the use of the Eawag template for water quality research, see the BD Biosciences white paper, "Assessing Water Quality with the BD Accuri™ C6 Flow Cytometer" (January 2013), available in the Resources section under BD Accuri™ C6 System at bdbiosciences.com.

Ordering Information

The software template is available at bdbiosciences.com/go/templates.

Description
BD Accuri™ C6 Eawag Water Quality Template (zip file) containing:
Eawag Water Quality Template for BD Accuri C6.c6t file
Eawag Water Quality Template_ReadMe.txt file

Related Kits

Description	Cat. No.
BD™ Cell Viability Kit	349483

* The water quality template and staining protocol were developed in collaboration with Eawag, the Swiss Federal Institute of Aquatic Science and Technology.

Visit bdbiosciences.com for more information.

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