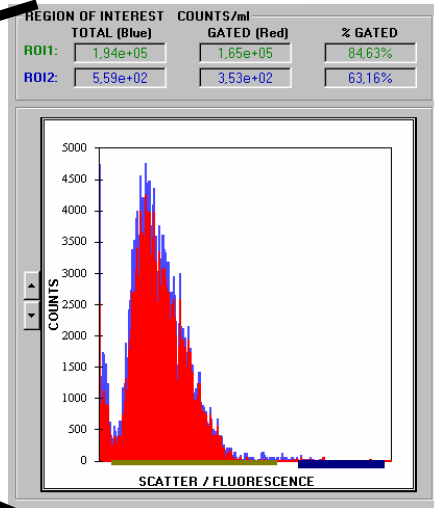


Feb. 6, 07: Application bulletin no 3.01

# Micro-organisms in water

Rapid method for detection of bacteria and other micro-organisms in water



**BioDETECT** provides a complete detection system, consisting of the MICROCYTE<sup>®</sup> instrument and a line of specific reagents, that within minutes reveals whether a water sample contains micro-organisms or not. The system may be used for monitoring the various steps in a purification process, QC of drinking water, wastewater and public pools amongst other.

- Reliability** - scientific method applied in health diagnostics, medicine and food production for several years
- Rapid response** - 10 minutes on-site feedback time - compared to the hours and days of laboratory testing
- Instrument based analysis** - eliminating the risk of subjective human interpretation
- Portability** - factory aligned, 12 kg moveable instrument with minimal space requirement, suitable for field work
- Real-time** - for continuous surveillance of micro-organisms in indoor and outdoor environments
- Ease of use** - one button operation and self-explainable software
- Proven technology** - with reference customers within the military, defence, food, environmental and pharmaceutical industries

## BioDETECT Instrument family

MICROCYTE<sup>®</sup> Field  
MICROCYTE<sup>®</sup> Aqua  
YEASTCYTE<sup>®</sup>

Easy to use instruments for accurate, rapid and cost effective bio-analysis for the pharmaceutical, biotech, food/beverage industry, military and universities.



MICROCYTE<sup>®</sup> Field & MICROCYTE<sup>®</sup> Aqua

The number of particles (determined from light scatter) and algae (determined from natural fluorescence) in a water sample may be quickly determined without any pre-treatment with the MICROCYTE<sup>®</sup>. In order to detect other micro-organisms, the sample is stained with a fluorochrom that enters all cells and binds to nucleic acids. The number of fluorescent particles are counted on the MICROCYTE<sup>®</sup> and taken as a measure of the total number of micro-organisms in the water sample.

## Procedure

### 1. Sample preparation

- Withdraw and aliquot from the source of interest and dilute in staining buffer.
- Analyse directly on the MICROCYTE<sup>®</sup> if no staining with fluorescent dyes is required.

### 2. Staining

- For total cell counts including algae, dilute sample in staining buffer and add staining solution (SYTO-62<sup>™</sup>).
- Incubate at room temperature for 1-5 minutes.

### 3. Counting

- Vortex and count on MICROCYTE<sup>®</sup>.

For a more detailed application note, please do not hesitate to contact us.

\* SYTO-62<sup>™</sup> was obtained from Molecular Probes, Inc.

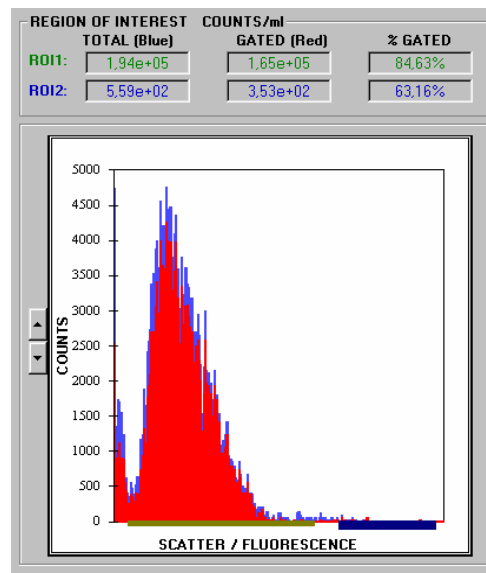
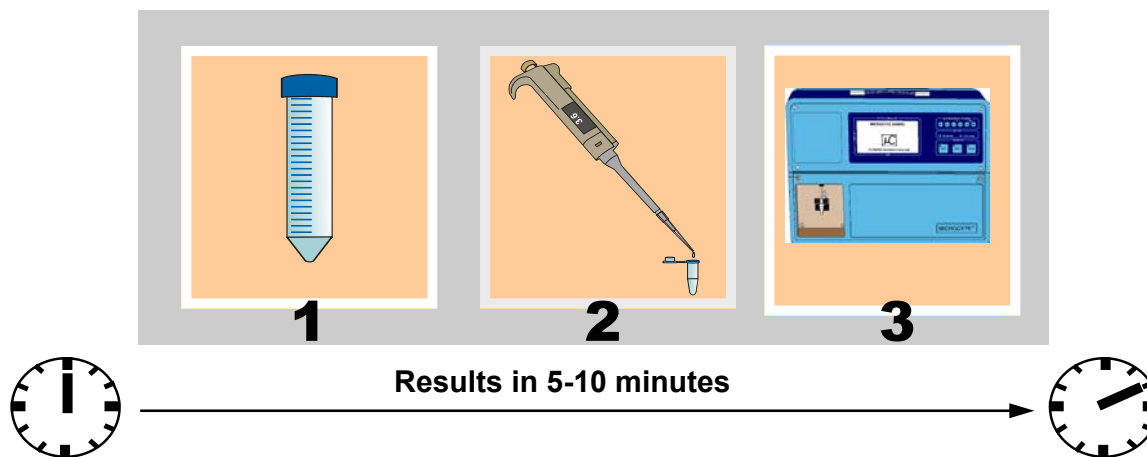


Figure 1: Micro-organisms in red.



BioDETECT AS, Olaf Helsetts vei 5, POB 56 Bogerud, N-0621 Oslo, Norway Phone: +47 22628152 Fax: +47 22628151

[mail@biodelect.no](mailto:mail@biodelect.no) [www.biodelect.no](http://www.biodelect.no)

BioDETECT develops, manufactures and markets instruments and kits targeted at the pharmaceutical, beverage, water, military/civil defense and OEM markets. The products aim at offering robust, rapid and accurate enumeration and analysis of microorganisms from a liquid, air or powder sample.

**MICROCYTE**