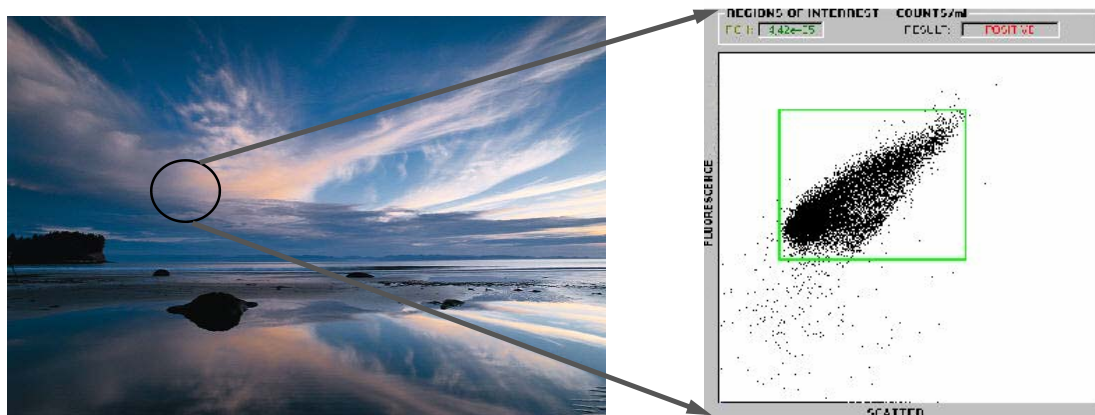


Feb. 6, 07: Application bulletin no. 4.01

## Bio surveillance

Rapid method for detection of bacteria and spores in air, water and suspicious samples



BioDETECT Rapid Bacteria Detection

**BioDETECT** provides a complete detection system, consisting of the MICROCYTE<sup>®</sup> instrument and complementary nucleic acid stains, that within minutes reveals whether an air, water or powder sample is potential dangerous. The MICROCYTE<sup>®</sup> may be used in force protection and to secure employee, customer and public safety as well as accommodate smooth operations of e.g. governmental services, airports, railway stations or other places where the public gather. A MICROCYTE<sup>®</sup> study conducted by FFI, the Norwegian Defence Research Establishment is available, contact [sales@biodetect.no](mailto:sales@biodetect.no)

**Rapid response** - results obtained within minutes

**Ease of use** - simple, easy to use procedure and instrumentation

**Reliability** - scientific method applied in health diagnostics, medicine and food production for several years

**Instrument based analysis** - reducing the risk of subjective human interpretation

**Computer interface** - enabling integration to other systems for preparedness, process and pattern recognition

**Portability** - 12 kg instrument suitable for airline hand baggage and use in the field

**Proven technology** - with reference customers within the military 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 total number of micro-organisms in a substance - water or powder- may be determined with the MICROCYTE<sup>®</sup> from BioDETECT. The micro-organisms are stained with a fluorochrome that binds to nucleic acids in order to distinguish them from other particles in the same size range. The number of fluorescent particles is taken as the total cell number in the sample.

## Procedure

### 1. Sample preparation

- Micro-organisms in air are collected by an Air sampling device and transferred to a liquid
- Water samples may be analysed directly
- Powder samples are dissolved in water before analysis
- Add ethanol to fix cells

### 2. Staining

- Dilute sample in staining buffer and add staining solution (TOPRO-3<sup>™</sup>).
- Vortex and incubate at room temperature for 1-5 minutes.

### 3. Counting

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

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

\* TOPRO-3<sup>™</sup> was obtained from Molecular Probes, Inc.

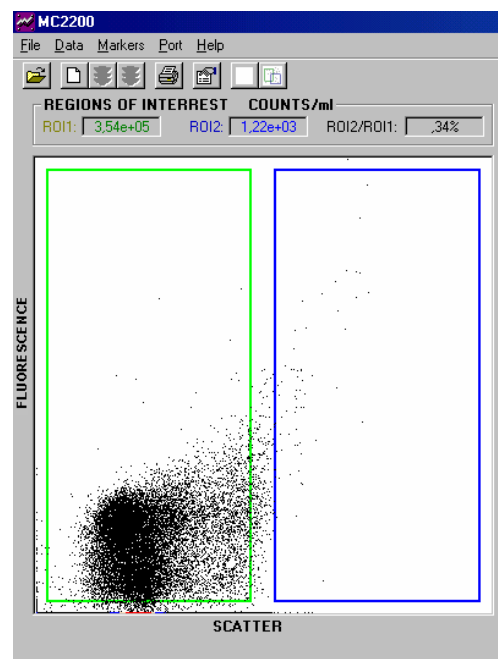
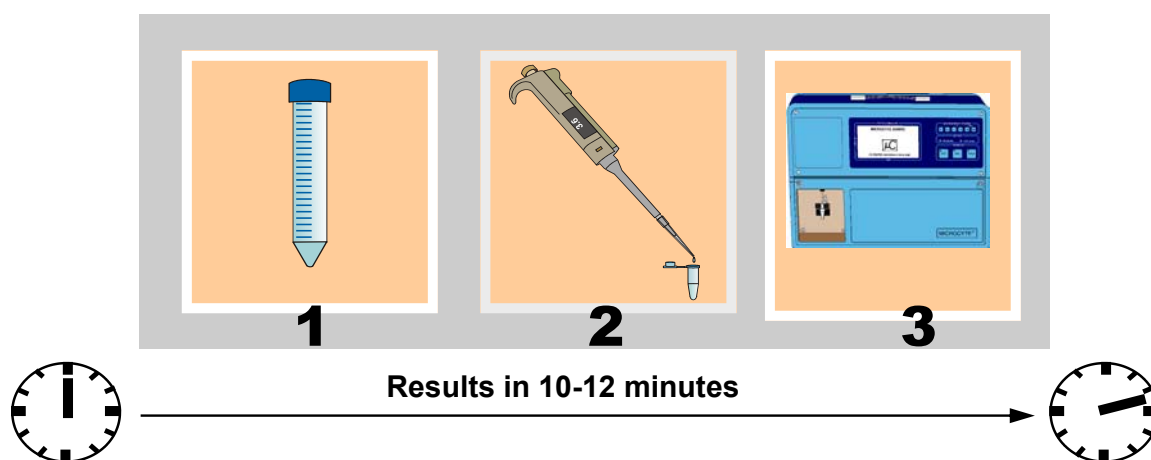


Fig. 1: Stained bacteria



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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