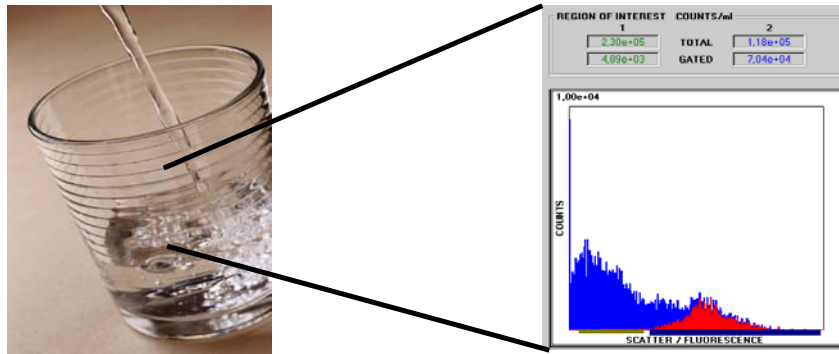


Feb. 6, 07: Application bulletin no 3.03

Pathogen removal in drinking water

Natural occurring auto fluorescent particles as surrogate indicator of pathogen (*Cryptosporidium*) removal in drinking water



BioDETECT Rapid Detection of auto fluorescent particles in water

BioDETECT provides a complete detection system, that within minutes reveals whether a water sample contains auto fluorescent (FL) particles. FL particles may be used as a surrogate indicator of protozoan parasites such as *Cryptosporidium*. The system may be used for monitoring the removal of FL particles during the various steps in a purification process of drinking water. Minimal sample preparation makes the MICROCYTE BPC well suited for integration into a online, continuous water surveillance system. The detection limit is below 10 FL particles per milliliter.

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

Rapid response - 1-3 minutes on-site feedback time

Instrument based analysis - eliminating the risk of subjective human interpretation

Portability - factory aligned, 12 kg portable instrument with minimal space requirement, suitable for field work

Real-time - for continuous surveillance of algae in indoor and outdoor environments

Ease of use - one button operation and self-explaining software

Proven technology - with reference customers within the military, defense, food, environmental and pharmaceutical industries

BioDETECT Instrument family

MICROCYTE[®] Field
MICROCYTE[®] Aqua
YEASTCYTE[®]

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



MICROCYTE[®] Field & MICROCYTE[®] Aqua

The total number of particles (determined from light scatter) and auto fluorescent particles (determined from natural fluorescence) in a water sample may be quickly determined without any pre-treatment with the MICROCYTE[®]. Total particle counts are influenced by additives during the purification process (e.g. flocculation agents), while auto fluorescent particles (algae) do not increase by such treatment. Thus, the number of naturally fluorescing particles in the water is an ideal parameter for monitoring the purification process, and may even be used as a surrogate indicator of pathogen removal.

Procedure

1. Sample preparation

- Pre-filter the water sample through a 100 µm mesh.

2. Counting

- Transfer 1 ml to a micro centrifuge tube.
- Vortex and count on MICROCYTE[®].
- Number of algae are displayed directly as counts/ml in two specified regions of interest.

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

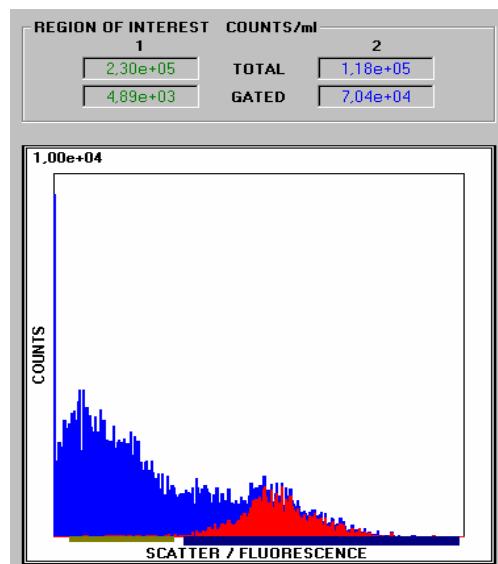
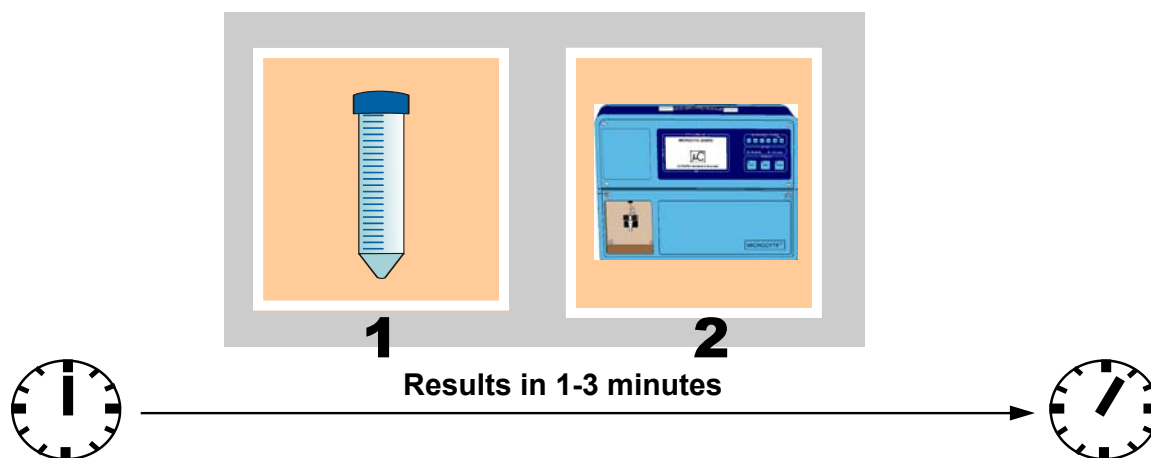


Figure 1: Total particles (blue) and auto fluorescent particles (red) in water



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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.