

Analytical Device for continuous Monitoring of Bacteria in pharmaceutical grade Water



The perfect Solution for:

- Continuous monitoring of bacterial cells in pharmaceutical grade water
- Measurement of grab samples
- Detection of biofouling and microbial excursions
- Verification of sanitization effects
- Discrimination between living and dead bacterial cells

Key Features:

- DNA specific stain: no false-positive results due to particles
- Perfect interaction between the BWT AQU@Sense MB and the PLC of the BWT plant
- Highly user-friendly and intuitive HMI
- Cartridge containing all necessary chemicals: no chemical or waste handling needed
- Sampling device is fully heat sanitizable
- User administration and password levels available
- Numerical and graphical output of measurement results

Description:

The BWT AQU@Sense MB is an automated flow cytometer specifically adapted for the continuous monitoring of bacteria in low nutrient water. The BWT AQU@Sense MB improves safety and promotes process control and understanding compared to the traditional plate counting.

Flow cytometry is a batch process in which the sample is mixed with a DNA specific fluorescent stain. After an incubation period the sample flows through a thin capillary where a laser induces fluorescence in the DNA bound stain. The fluorescent activity and the side scatter (SSC) are recorded for each cell and particle. Inorganic particles are not counted, as no fluorescent stain is bound to them.

The BWT AQU@Sense MB lowers cost by reducing cost-intensive plate counting to a minimum. Plate counting may be replaced fully after a validation of the BWT AQU@Sense MB according to USP <1223> or Ph. Eur. 5.1.6. Further financial saving can be obtained by re-evaluating the temperature and interval of hot water sanitization.

All necessary chemicals are contained in a securely sealed cartridge. The replacement of the refillable cartridge is quick and clean and no handling of hazardous chemicals is required. The measured sample and all chemicals used are directed back into the cartridge. Therefore, no contaminated wastewater is generated on-site. Each measurement is followed by a cleaning step to prevent biofouling and secure high-quality results.

Major time-savings can be achieved compared to plate counting, as the time-to-result is only 20min. The measuring interval can be adjusted manually from 30min to 6h, or may be controlled automatized by the PLC of the BWT generation plant.

The BWT AQU@Sense MB reduces the error potential of manual sampling significantly. Grab samples are measured straight out of a screw-on, sterilized sampling tube and repeated measurement of the same sample can be automated.

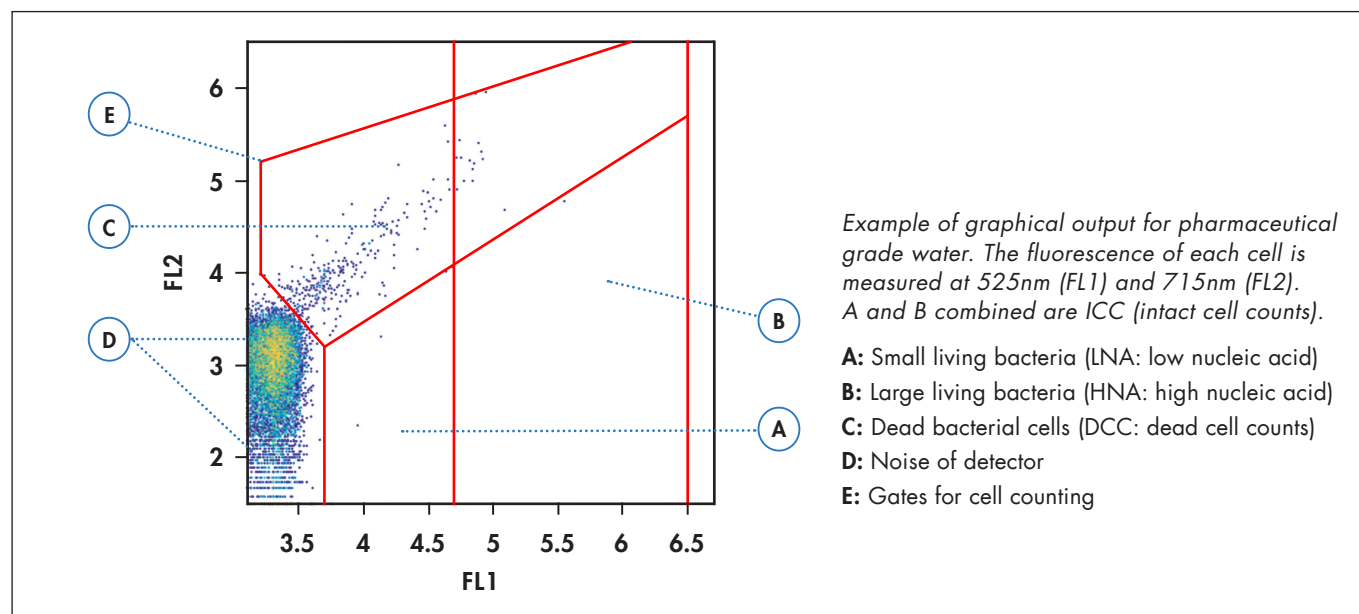
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For You and Planet Blue.



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Technical data:

General:	
Measuring principle	Flow cytometry
Protection degree	IP65
Ambient temperature	+5°C ... +35°C
Ambient humidity	10 .. 90% RH
Dimensions (WxDxH)	350 x 240 x 373mm
Weight	14kg
Connections:	
Outputs	4 digital outputs and 2 x 4...20mA analog outputs
Inputs	4 digital inputs
Sampling	¼" Swagelok male
Waste water	¼" Swagelok male
Measurement:	
Sampling volume	260µl
Sampling mode	Continuous or manual
Measurement interval	30min to 6h
Time-to-result	20min
Cartridge capacity	Max. 1000 measurements