

BactoSense TCC

Automated flow cytometer for online monitoring of microbial cell number in drinking water



Applications

- Flow cytometric determination of total microbial cell count (TCC)
- Online or manual operation
- Determination of the water «fingerprints» and cell size ratios (LNA/HNA)
- Anywhere a fast answer concerning the general microbiological quality of drinking water is required
- Monitoring of raw water quality
- Monitoring of water treatment processes
- Monitoring of water distribution networks, flushing procedures, maintenance etc.
- Monitoring of private and public in-house water installations
- Rapid microbial contamination detection
- Integration into early warning system possible
- Disinfection control
- Research and troubleshooting

Features

- Fully automated flow cytometer specifically designed for industrial requirements
- Detection of more than 99% of microbial cells
- Result available 20 minutes after sampling
- Faster, cost saving and more realistic results than plating (HPC)
- Flexible settings for threshold values and alarms
- User-friendly operation and maintenance concept
- Safe-to-handle cartridge containing all chemicals and waste
- No handling of chemicals and no samples preparation necessary
- Compact instrument with a small footprint
- Easy system integration thanks to multiple interfaces

Industries

- Water treatment & distribution
- Food & beverage
- Laboratories & universities
- Pharmaceuticals & cosmetics

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Innovations with benefits



Fully automatic system

Sampling – cell staining – measurement – cleaning is performed quickly and fully automatically:

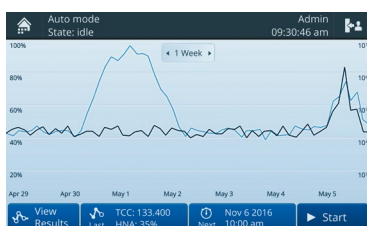
- All manual preparation steps are eliminated, therefore no specially trained staff is required.
- The whole program sequence only takes 30 minutes.
- Allows continuous measurement even in remote locations.



Simple cartridge concept

All chemicals, including waste, are packed in a hermetically sealed, recyclable cartridge. One cartridge is sufficient for 1'000 measurements:

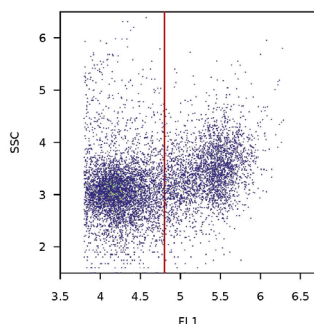
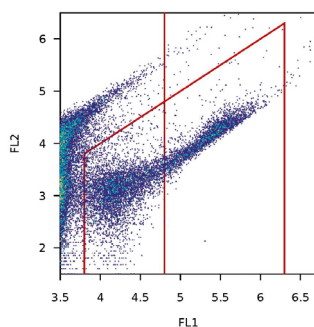
- No need for purchases, logistics, handling of chemicals or waste disposal.
- Exchanging the cartridge is as easy as replacing an ink cartridge in a printer.
- Economic thanks to the use of recyclable cartridges.



Intelligent operating unit

A large touch screen with colour display serves as a control unit:

- Control unit is integrated in the system.
- An automatic and a manual mode allow simple and clear operation.
- An internal database allows recalling and displaying measurement history.
- Extensive communication options including an integrated web interface.



User friendly maintenance concept

The instrument is designed to only require one scheduled maintenance per year. This work will be carried out by a qualified SIGRIST representative:

- High availability; maintenance can be planned.
- Transparent cost for maintenance and operation which can be calculated in advance.
- Verification of instrument accuracy can be done by the operator at any time using a reference solution.

Technical Data

Instrument data:

Measuring principle:	Flow cytometry
Light source:	Laser diode 488 nm
Fluorescence channels:	525/45 (FL1) 715 LP (FL2)
Side-scatter:	488/10 (SSC)
Measuring span for TCC:	1'000 – 2 Million cells/ml
Detection limit:	100 – 5 Million cells/ml
Lower size detection limit:	100 nm
Microbial parameters determined:	TCC/ml, LNA/ml, HNA/ml, HNAP(%)
Sampling:	Online or manual
Sample volume:	260 µl
Cartridge:	Hermetically sealed system for reagents, cleaning liquids and waste
Cartridge capacity:	Max. 1'000 measurements
Automatic measuring interval:	Minimum 30 minutes, maximum 6 hours
Ambient temperature:	+5 °C .. +35 °C
Ambient humidity:	10 .. 90% RH
Protection degree (electronics compartment):	IP 65
Power supply:	100 – 240 VAC, 50/60 Hz, 1.4 A, IP 67
Power consumption max:	20 W
Dimensions (WxDxH):	350 x 240 x 373 mm
Weight:	14 kg

Operation:

Display:	WVGA, 7.0"
Operation:	Touchscreen
Data storage:	32GB
Outputs:	2 x 4 .. 20 mA, galvanically separated, 4 x digital outputs, freely configurable
Digital Interfaces:	USB, Ethernet

Your representative:



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SIGRIST
PROCESS-PHOTOMETER

SIGRIST-PHOTOMETER AG

Hofurlistrasse 1 · CH-6373 Ennetbürgen

Tel. +41 41 624 54 54 · Fax +41 41 624 54 55

www.photometer.com · info@photometer.com