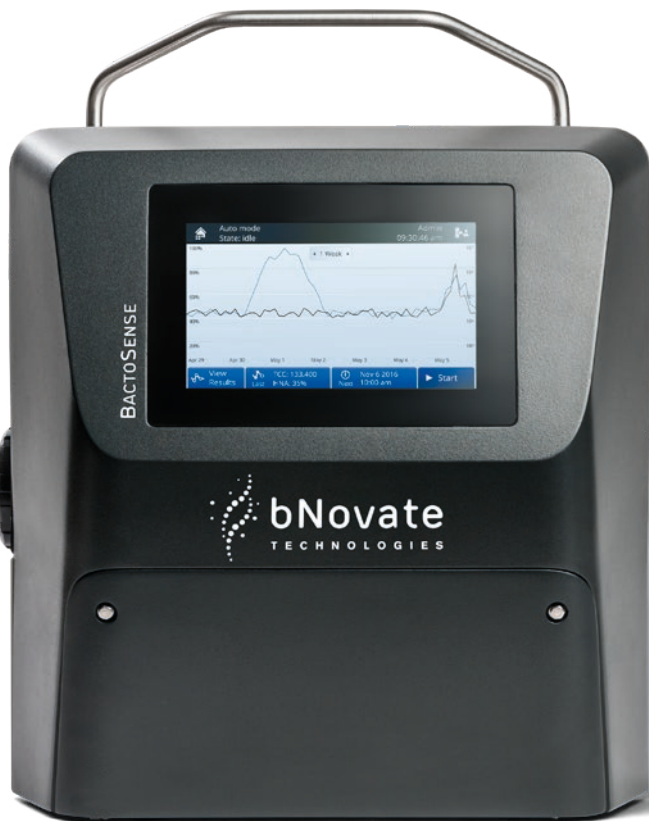




BactoSense™

Automated flow cytometer for online monitoring of bacteria in water



- Fast** Results available within 20 minutes, analyses up to 48 samples in 24h
- Safe** No handling of chemicals, all components are in a sealed and recyclable cartridge
- Accurate** Flow cytometry technology allows precise detection of more than 99.9% of microbial cells
- Secure** 24/7 monitoring: set a threshold value to get an alarm in time to act accordingly
- Reliable** Self-check routines, factory calibration and low maintenance

- Easy to use** Fully automated sample preparation, measurement and cleaning – can be used by anyone
- Cost saving** Reduce the required number of plating tests (HPC) for a very low total cost of ownership
- Universal** For process monitoring, lab analysis and field intervention, online or manual sampling, gives TCC, ICC, HNAC/P and LNAC
- Compact** Built for process or field operations, IP65
- Integrated** Choice of multiple interfaces

Main applications

Monitoring of raw water quality, water treatment processes, water distribution networks, flushing procedures, etc.

- Disinfection control
- Filtration efficiency
- Distribution network validation
- Reservoir surveillance

Industries

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

Parameters provided

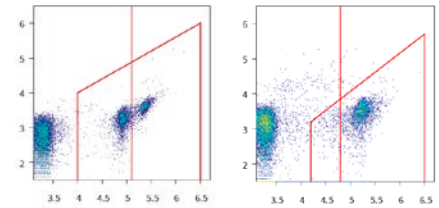
- TCC Total Cell Count
- ICC Intact Cell Count
- HNAC High Nucleic Acid Count
- LNAC Low Nucleic Acid Count
- HNAP High Nucleic Acid Percentage

Specifications

Measuring principle

Flow cytometry

| | |
|------------------------------|--|
| Light source | Laser diode 488nm |
| Optical detection | Fluorescence: 535/43 (FL1), 715 LP (FL2), Side scatter 488/10 (SSC) |
| Lower size detection limit | 0.1 µm |
| Measuring range | 1'000 - 2 Million cells/ml |
| Detection limit | 100 - 5 Million cells/ml |
| Accuracy | < 5 % relative |
| Automatic measuring interval | Minimum 30 minutes, maximum 6 hours |
| Microbial parameters | TCC/ml, ICC/ml, LNA/ml, HNA/ml, HNAP(%) |



Dotplots showing TCC and ICC

Sampling

Online or manual

| | |
|------------------------|------------------------------------|
| Sample volume | 260 µl sampled, 90 µl for analysis |
| flow rate (online) | 200 - 400 ml/min |
| chlorine concentration | max. 3 mg/l |
| turbidity | 1 - 10 FTU |
| pH-value | 5 - 12 |
| temperature range | 5..40°C |
| conductivity | 0 - 100'000 µs/cm à 20°C |



Online sampler / manual sampler

Instrument

Factory calibrated

| | |
|----------------------------|---|
| Display | Touchscreen |
| Data storage | 32 GB |
| Protection level enclosure | IP 65 |
| Dimensions (WxDxH) | 350 x 240 x 373 mm |
| Weight | 14.5 kg |
| Power supply | 100 - 240 VAC, 50/60 Hz, 1.4 A, IP 67 |
| Power consumption | 20 W |
| Ambient temperature | 5..30°C |
| Relative humidity | 10 - 90% RH |
| Cartridge | Hermetically sealed enclosure for reagents, cleaning liquids and waste |
| Cartridge capacity | Max. 1'000 measurements, 9 months validity |



Cartridge

Interface

Digital and analogue

| | |
|--------------------|--|
| Inputs | 4 x digital, freely configurable |
| Outputs analogue | 2 x 0/4 .. 20 mA, galvanically isolated |
| Outputs digital | 4 x digital, freely configurable |
| Digital interfaces | Sealed USB, Ethernet connections, Modbus |



IO box

Accessories

| | |
|----------------|---|
| TCC Refill | Filling and servicing of cartridge - to measure Total Cell Count of up to 1'000 samples |
| ICC Refill | Filling and servicing of cartridge - to measure Intact Cell Count of up to 1'000 samples |
| IO box | Input/Output connection box |
| Cleaning kit | Deep cleaning in case of cross contamination |
| Validation kit | Easy way to check your instrument after transport or long period out of use |
| Transport case | For safe transport of your BactoSense |



Validation & Cleaning kits



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