

rqmicro.COUNT

Rapid microbiological water analysis





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Applications



Industry

- Cooling Tower Monitoring
- Wastewater Reuse
- Hygiene Monitoring (HACCP)
- Aquaculture (RAS)
- Applied Research



Facility Management

- Water Safety Concept
- Outbreak Management
- Legionella Risk Assessment



Service Labs

 Rapid Microbiology Testing



- Monitor water microbiology and detect contamination
- Reduce usage of fresh water, biocide or energy
- Control and optimize water treatment
- Reduce health risks and avoid business interruptions
- Offer better insights to internal and external customers

Improve water quality control





rqmicro.COUNT Features



Fast

- Independent from cell cultivation
- Intact cell count results available in 30 minutes
- Specific pathogen cell counts available in 2 hours
- Analyse up to 8 samples at the same time
- On-site flow cytometric detection

Precise

- Single-cell counting, including viability assessment
- Highly specific kits for Legionella and E. coli detection
- Automated sample purification and analysis
- No sample cross contamination in the cartridge
- Robust device with self-calibrating optics





Convenient

- Plug-and-play instrument for use on-site or in labs
- Safe handling (class 1 Laser product)
- Predefined programs and objects
- Maintenance-free cartridge system
- Intuitive operation through a touch screen

Connected

- Remote access to reports, trends and data analysis
- Easy-to-read dashboard for actionable results
- Notification for immediate response



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Workflow and specifications

	1. Filtration	2. Reaction	3. Analysis
Intact cells (8 samples)		Add 1 mL to reaction tube	Add sample to cartridge and
Total cells (8 samples)		\circlearrowright 15 min reaction time	
<i>Legionella</i> (4 samples)	Filter 100 mL water	\eth 60 min reaction time	$\sqrt[5]{}$ 45 min for 4 samples
<i>E. coli</i> (8 samples)			\eth 80 min for 8 samples

	Result	Specificity	Sensitivity
Intact cells	Number of viable cells per 1 mL	All bacteria	Working range without dilution from 100 - 3,000,000 cells
Total cells	Number of total cells per 1 mL	All bacteria	Working range without dilution from 100 - 3,000,000 cells
Legionella	Number of viable cells per 100 mL	98% <i>Legionella pneumophila (L.p.)</i> serogroup 1 / serogroup 1-15	100%
E. coli		96% <i>Escherichia coli</i> Including the Big 6 and E. coli O157	93%

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Grounded in science, designed for industry

rqmicro.COUNT technology has been developed after 12 years of research and development at rqmicro (rapid quantitative microbiology) in collaboration with the Swiss Federal Institute of Technology (ETH) and Swiss Federal Institute of Aquatic Science and Technology (Eawag).



After more than 100 years, analytical methods in water microbiology have seen little progress and are mainly based on cell cultivation. The method developed by rqmicro does not require cell cultivation due to the specific isolation of target cells and the high-performance optical detection. As a result, the method delivers results on single-cell level within hours instead of days. The system isolates target cells from samples using immunomagnetic separation and determines the concentration of total/viable cells using flow cytometry. Up to eight samples can be processed in parallel.

These high-end technologies have been limited to use in academic, research and development laboratories for the past 40 years and are now available for routine use. rqmicro.COUNT enables operators of cooling towers, industrial and public buildings, and water treatment plants to monitor the presence of bioburden and total microbiological load in water with rqmicro Intact Cell Count and Total Cell Count kits. In our range of available kits, we offer our users the possibility to monitor the most dangerous water pathogens such as *Legionella* and *E. coli*.

"The aim of rqmicro is to enable customers to take control over the microbiological situation in water systems. Reliable and quantitative data makes it possible to improve water management and risk control to make water safer and create value for the water industry."

> **Dr. Hans-Anton Keserue**, Founder & CEO of rqmicro





Checklist

If your answer to at least one of the following questions is "YES", rqmicro.COUNT could be the solution you are looking for.

	YES	NO
I would benefit from a better understanding of the microbiological situation in my water.		
If I had a faster microbiological test, I could optimize my water treatment.		
If I relied on quantitative microbiology results, I could plan maintenance more easily and prevent unforeseen costs.		
If I had online access to microbiology reports and hygiene alerts, I could manage my daily work better.		
If I had more granular insight into microbiological trends, I could implement more effective risk management procedures.		

Contact our sales managers for more information:

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make water safe

Online resources

rqmicro.COUNT product page

INDUSTRY

FACILITY MANAGEMENT

Microbial Monitoring in F&B

Cooling tower monitoring

Aquaculture (RAS)

Wastewater reuse

Applied research

News

<u>Events</u>

<u>Videos</u>

Water safety concept

<u>Outbreak management</u>

Legionella risk assessment

SERVICE LABS

Rapid microbiology testing

"The kit presents a new technology emerging in environmental monitoring of Legionella with faster time to result, matrix independence, and good sensitivity."



License No.: 052002 for L.p. SG 1 DETECT Kit

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