

Legionella Kits



- Speed
 - Time to result less than 2 hours
- Specificity
 - High specificity and sensitivity
 - Detection of viable but non-culturable cells
 - Discrimination of dead cells
- Application
 - Aqueous samples
 - Compatible with flow cytometry, cultivation, PCR, microscopy, etc.

Legionella Facts

Class	Gammaproteobacteria
Genus	<i>Legionella</i> – with about 70 species
About <i>L.p.</i> SG1	15 substrains
Morphology	Rod-shaped, 0.3 - 0.9 µm wide and approx. 2 µm long, gram-negative, non-spore-forming
Natural habitats	Freshwater environments and soil, facultative intracellular parasite, invades and replicates inside amoeba
Artificial habitats	Grows and spreads in human-made water systems, forms biofilm in pipes and containers
Infectious agent of	Pontiac fever and Legionnaire's disease the latter with a mortality rate of ≈ 10%
Transmission	Inhalation of aerosol containing bacteria; <i>Legionella</i> can spread at least 6 km by air from the source
Defense mechanism	Endures harsh conditions in a viable but non-culturable state (VBNC)
Growth conditions	Multiplies between 25°C and 42°C under aerobic conditions

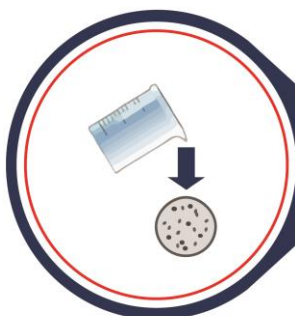
In **96.3%** of Legionnaire's disease cases, *Legionella pneumophila* was identified as infectious agent.

In **83%** of these cases the infection was associated with *Legionella pneumophila* serogroup 1.*

*Source: Legionnaires' Disease in Europe, 2011 To 2015, Julien Beauté - on behalf of the European Legionnaires' Disease Surveillance Network, <http://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2017.22.27.30566>

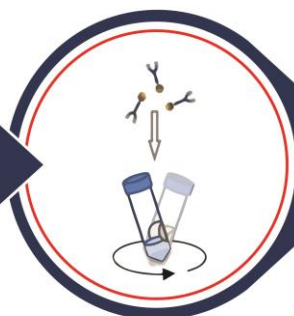
rqmicro Method

Concentration



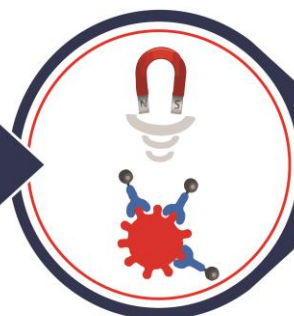
Filtration of sample and resuspension in a small volume of buffer.

Reaction



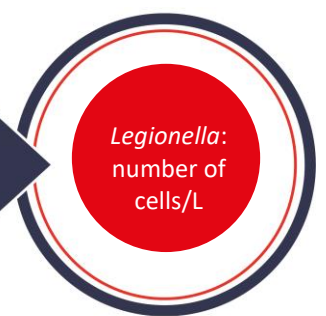
Incubation with reagents.

Purification



Immunomagnetic separation (IMS) of target cells and elimination of > 95% of the competing flora.

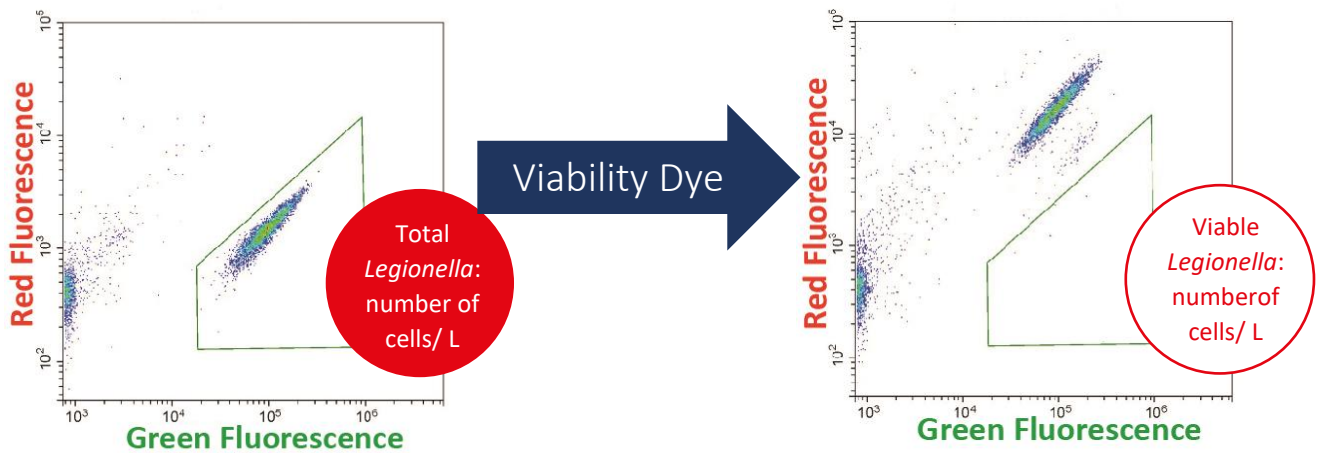
Quantification



Quantification by flow cytometry, cultivation, fluorescence microscopy, PCR, etc.

rqmicro Method & Flow Cytometry

Time to Result less than 2 Hours



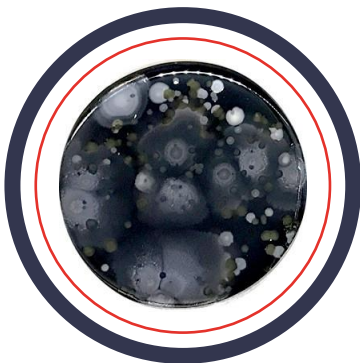
Single cell analysis by flow cytometry allows for fast quantification of target cells. By adding viability dye, a distinct population of dead cells moves out of the target gate, which allows quantifying the viable cell population. In contrast to the cultivation method also viable but non-culturable cells are detected which minimizes the risk of false-negative results.

rqmicro Method & Cultivation on Agar Plates

Elimination of Competing Flora

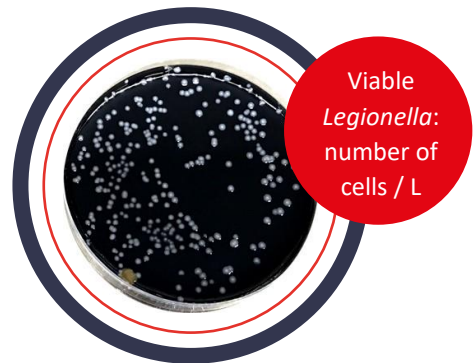
Without IMS: overgrown plate

✘ Not evaluable



With IMS: single *L.p.* SG1 colonies

✔ Clear results



IMS

Kits






Organism	Quantification Step	Purification Step*	Kit
<i>L. pneumophila</i> SG1	Flow Cytometry	rqmicro.Stream	<i>L.p.</i> SG1 DETECT rqmicro.Stream
		MIMS	<i>L.p.</i> SG1 DETECT MIMS
	Cultivation	rqmicro.Stream	<i>L.p.</i> SG1 SEP rqmicro.Stream
		MIMS	<i>L.p.</i> SG1 SEP MIMS
<i>L. pneumophila</i>	Flow Cytometry	rqmicro.Stream	<i>L.p.</i> SG1-14 DETECT rqmicro.Stream
		MIMS	<i>L.p.</i> SG1-14 DETECT MIMS
	Cultivation	rqmicro.Stream	<i>L.p.</i> SG1-15 SEP rqmicro.Stream
		MIMS	<i>L.p.</i> SG1-15 SEP MIMS

*rqmicro.Stream: automated IMS; MIMS: manual IMS

Kits are available as **PLUS option** to meet the increased requirements for the precise and reliable analysis of complex aqueous matrices, e.g. industrial water or cooling tower water.

Our R&D team is constantly working on expanding our offer. To find out more about kits under development please check out our website: www.rqmicro.com

rqmicro products are successfully applied in the following areas:

-  Service laboratories
-  Healthcare
-  Public facilities
-  Water supply
-  Industry and cooling towers

Contact us:

rqmicro AG
Brandstrasse 24
8952 Schlieren
Switzerland

+41 44 512 51 51

Sales support: sales@rqmicro.com
General information: info@rqmicro.com

www.rqmicro.com, Copyright© rqmicro AG 2018