



Legionellosis are infections caused by bacteria of the genus *Legionella*, generally by aerosol inhalation. With over 95,000 human cases reported per year, it is one of the most frequent causes of waterborne disease.

Legionella species are capable of colonizing artificial water systems and equipment containing water, making this pathogen a major issue for:

- Industries where cooling towers can generate a wide dispersion of bacteria;
- Hospitals and care facilities where contaminated hot tap or shower waters are potential sources of *Legionella* outbreak and can effect weakened patients;
- Public-access buildings, such as spas and swimming pools, where aerosol dispersion is common;
- Fountains in public space.

Pall GeneDisc Technologies provides complete solutions to water system network managers for real time *Legionella* risk management.

GeneDisc System Benefits

Rapid — While culture methods require up to 12 days to obtain results, Pall's GeneDisc method allows a quantification of *Legionella* in as fast as 2 hours.

Unambiguous — The PCR specificity allows a direct and accurate identification of *Legionella* sp.

Easy to use — Matrix specific protocols are designed for routine use and validated from sample to result.

Modular — System modularity fits your throughput needs: up to 88 samples for quantification and 96 samples for detection and identification can be simultaneously analyzed.

A Solution Designed for Water Network Management

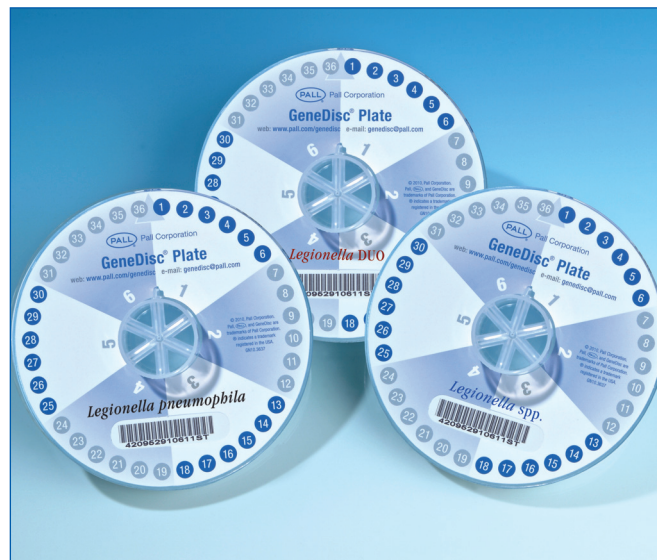
Reduce down-time — Shorter time to results enables reactive surveillance preventing delayed intervention on water networks and system closures.

Implement appropriate and effective disinfection measures — Mapping water system networks with the GeneDisc system identifies and targets contaminated pipework and water points.

In line with NF T 90-471 and ISO/TS 12869 — NF VALIDATION certified method against both standards.

GeneDisc® Technologies

For the rapid quantification, detection and identification of *Legionella* spp., *L. pneumophila* and *L. pneumophila* serogroup 1



Quantify *Legionella* spp. and *Legionella pneumophila* simultaneously — GeneDisc Plate *Legionella* DUO enables combined detection and quantification of both *Legionella* spp. and *Legionella pneumophila* using the same sample preparation and without any additional hands-on time.

Direct detection and identify the *Legionella* — GeneDisc Plate *Legionella* ID enables rapid source screening and the identification of *Legionella* spp., *L. pneumo* and *L. pneumophila* Serogroup 1.

Legionella Identity Card

Bacteria	Gram – flagellated bacteria
Location	Ubiquitous aquatic organism (from drinking water to cooling tower aerosols)
Disease	Legionellosis (Pontiac fever, Legionnaires' disease)
Prevalence	<i>L. pneumophila</i> is responsible for 90% of legionellosis infections with 84% associated to the Serogroup 1
Outbreaks	450 % increase over the past 15 years (CDC report, 2017) 2016 Incidence rate: 19 cases / 1 million

How the System Works



Technical Information

Total Turnaround Time	2 hours for clear water samples 3 hours for complex water samples
PCR Cycle Time	1 hour
Limit of Detection	5 GU/PCR well
Limit of Quantification	25 GU/PCR well
Quantification Range	25 – 250,000 GU/PCR well
PCR Efficiency (<i>e</i>)	75 % < <i>e</i> < 125 %
Optimal Recovery	> 50 %
Specificity	Wide range of strains tested for inclusivity and exclusivity
<i>Legionella pneumophila</i> Calibrator (external quantitative control)	Included in each GeneDisc Plate to validate accuracy of quantification
Internal Positive Control Per Sample Analysis	Detects presence of inhibitors in DNA extract sample

Ordering Information

Part Number	Description	Samples/pack
Equipment		
EGDCV3A	GeneDisc Cyclor Base Unit	
EGDSV3A	GeneDisc Cyclor Sub Unit	-
EGDUL1A230 (EU)	GeneDisc Ultra-Lyser (for clear and complex water samples)	-
EGDUL1A120 (US)		
EGDUP1A	GeneDisc Ultra-Purifier (for complex water samples)	-
Consumables		
ALEGPNE205	<i>Legionella pneumophila</i> Standard DNA (5 tubes)	-
PENV11096	Extraction Pack Environment 01 (for clear or complex water samples)	96
PENV13100	Extraction Pack Environment 03 (for clear water samples)	100
GLEGPNE206006	GeneDisc Plate <i>Legionella pneumophila</i>	30
GLEGPNE212006		66
GLEGSP206006	GeneDisc Plate <i>Legionella</i> spp.	30
GLEGDUO206006	GeneDisc Plate <i>Legionella</i> DUO	30
GLEGID206006	GeneDisc Plate <i>Legionella</i> ID	36
GLEGID212006		72

We also offer a full product range for pathogen detection in food and for spoilage organisms in beverages.

Quantitative tests for pathogens in water (*E. coli*, *Enterococcus*...) are also available.

For more information including part numbers please contact us.



GEN 25/03 – 12/07
GEN 25/04 – 12/07
ANALYTICAL METHODS FOR WATER
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