

## GeneDisc® Technologies

For the rapid quantification of *Legionella pneumophila* and *Legionella spp.* in water

Legionellosis are infections caused by bacteria of the genus *Legionella*, generally by aerosol inhalation. With over 9,000 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.

**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 can be analyzed simultaneously.

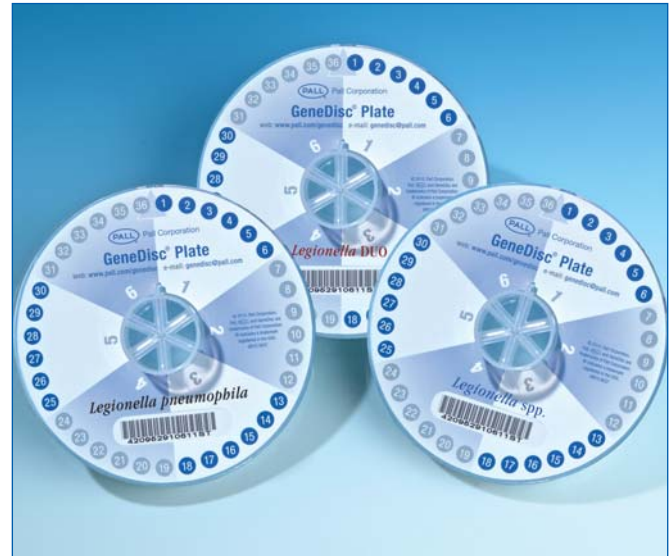
### A Solution Designed for Water Network Management

**Reduce down-time cost** — 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.

**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.



### *Legionella pneumophila* ID

Bacteria	Gram – flagellated bacteria
Prevalence	Ubiquitous aquatic organism (from drinking water to cooling tower aerosols)
Disease	Legionellosis (Pontiac fever, Legionnaires' disease)
Human Cases Reported	6,296 (ECDC, 2010) 3,346 (CDC, 2010)
Related Clusters, Outbreaks	130 (ECDC, 2010) 10 for recreational water (CDC, 2007-2008) 12 for drinking water (CDC, 2007-2008)

## 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 (Reference Material)	Included in each GeneDisc Plate to validate accuracy of quantification
Internal Positive Control Per Sample Analysis	Detects presence of inhibitors in each DNA extract sample

## Ordering Information

Part Number	Description	Samples/pack
<b>Equipment</b>		
EGDUL1A230 (EU)	GeneDisc Ultra-Lyser	-
EGDUL1A120 (US)	(for clear and complex water samples)	-
EGDUP1A	GeneDisc Ultra-Purifier	-
	(for complex water samples)	-
EGDCV3A	GeneDisc Cyclor Base Unit	-
EGDSV3A	GeneDisc Cyclor Sub Unit	-
<b>Consumables</b>		
PENVI1096	Extraction Pack Environment 01	96
	(for clear or complex water samples)	
PENVI3100	Extraction Pack Environment 03	100
	(for clear water samples)	
GLEGPNE106006	GeneDisc Plate <i>Legionella pneumophila</i>	30
GLEGPNE112006		66
GLEGSPP106006	GeneDisc Plate <i>Legionella</i> spp.	30
GLEGDUO106006	GeneDisc Plate <i>Legionella</i> DUO	30
ALEGPNE105	<i>Legionella pneumophila</i> Standard DNA	-
	(5 tubes)	

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

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  
[www.afnor-validation.com](http://www.afnor-validation.com)



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