

CATALOGUE



Cooling Towers

**Your solution facing the
Legionella risk**

Year: 2020

SUMMARY



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REMINDERS ABOUT LEGIONELLA AND C4HYDRO SOLUTIONS

➡ **Legionnaire's disease:** Disease of bacterial origin, fatal in **10 to 50% of cases**.

Bacteria causing the disease¹: *Legionella pneumophila* (there are 16 serogroups of this pathogenic bacterium).

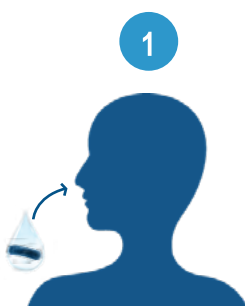
¹ In more than 98% of cases

COOLING TOWERS AND THE BACTERIUM

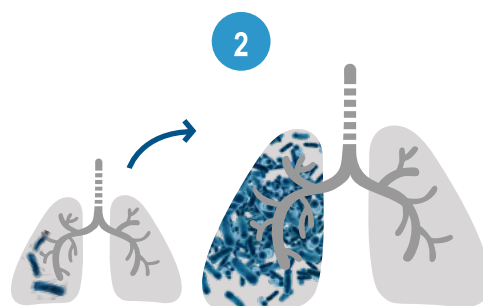
Cooling towers are similar to «air/water» heat exchangers. At certain points in the system, the water temperature is often ideal to foster the proliferation of *Lp*.



Contaminated microdroplets spread over several miles through the air.



It becomes a danger to humans when inhaled through contaminated microdroplets.



The *Legionella pneumophila* bacteria nests in the lungs and multiplies until it causes legionnaire's disease a **respiratory infection**.

COOLING TOWERS MONITORING IS ESSENTIAL, PREVENT THE RISKS!

C4HYDRO SOLUTIONS

Based on the same technique as the regulatory method*, our innovative technology, patented by the CNRS, will allow you to **detect the pathogenic bacterium that causes the disease: *Legionella pneumophila* cultivable from all serogroups**

Using our equipment is **simple, fast and reliable**;

➡ 3 STAGES:

1

10min

PREPARATION

Cultivation on selective GPC agar culture of the test sample.

2

47hrs

INCUBATION

Assimilation of the modified sugar exclusively by *Legionella pneumophila*
(Waiting time)

3

50min

REVELATION

Revealing the assimilated modified sugar using colorimetry.
(Result)

I DETERMINE MY THRESHOLD BASED ON THE FILTERED SAMPLE VOLUME!

*Regulatory method: reference method NF T90-431, result process in 10-14 days. Legionella concentration analyses carried out in laboratories accredited by COFRAC (Comité Français d'Accréditation).



OVERALL PROCESS: 48hrs
(1hr OF PROCESS + 47hrs OF INCUBATION)



Products using technology by





WHICH SOLUTION DO I NEED?

III ➡ I DON'T HAVE ANY SPECIFIC EQUIPMENT AND I NEED TO CARRY OUT:

1 to 2 analysis per week

I use the **Uni-Test** mobile lab with the **Legio EZ-Count** consumables kit



Ref. : 00 376

(page 5)

+



Ref. : 00 279

(page 6)

More than 2 analysis per week

I use the **Multi-Test** mobile lab with the **Legio EZ-Count** consumables kit



Ref. : 00 365

(page 5)

+



Ref. : 00 279

(page 6)

III ➡ I HAVE LABORATORY EQUIPMENT (glassware, scales, ovens, cold room, etc.) AND I NEED TO CARRY OUT:

1 analysis per week

I use the **Legio EZ-Count** kit with the filtration manifold and my equipment¹



Ref. : 00 129

(page 8)

+



Ref. : 00 279

(page 6)

More than 1 analysis per week

I use the **Legio EZ-Lab** kits with the filtration manifold and my equipment¹



Ref. : 00 129

(page 8)

+



Ref. : 01 723

(page 7)

¹It is possible to equip or replace missing equipment, see [page 8](#).



LIST OF EQUIPMENT

III ➔ I DON'T HAVE ANY SPECIFIC EQUIPMENT:

a) Mobile laboratories:



Designation	Reference
Uni-Test	00 376

Mobile laboratory designed to detect *Legionella pneumophila* in 48 hours.

1 analysis at a time.

For use with the **kit Legio EZ-Count kit** (Ref. : 00 279)

All-in-one laboratory:

- Membrane support with magnetized funnel
- Vacuum pump with suction tube
- Bottle for filtration
- Incubator
- Timer
- Colorimeter
- Syringe 10 mL



Designation	Reference
Multi-Test	00 365

Mobile laboratory designed to detect *Legionella pneumophila* in 48 hours.

Up to 6 tests at a time.

For use with the **Legio EZ-Count kit** (Ref. : 00 279)

All-in-one laboratory:

- 6 holes for filtration each equipped with a cap, a membrane support and a magnetized funnel
- Integrated filtration system with antibacterial filter and pressure gauge
- 1000 mL filtrate tank
- Integrated incubator for 6 petri dishes with temperature recorder
- Timer
- Colorimeter
- Syringe 10 mL
- 5 meter power cable
- Power supply 110-240V 50/60Hz
- Trolley with wheels that can easily be unfolded by simply pressing the lock
- Ball bearing casters
- Easy opening latches
- Padlock lugs suitable for air transport

Mobile laboratory that can be rented on a quarterly basis.

For more information, please contact us (contact details on [page 11](#)).



LIST OF CONSUMABLES

III ➔ I DON'T HAVE ANY SPECIFIC EQUIPMENT:

b) The Consumables Kit:



Designation	Reference
Legio EZ-Count Kit	00 279

Set of reagents required for detection of *Legionella pneumophila* using one of the above mobile labs. Suitable for cooling towers.

Features: 1 kit = 1 analysis, use-by-date: 3 months, to be stored at 4°C.

For use with the mobile laboratory **Uni-Test** (Ref.: 00 376) or **Multi-Test** (Ref.: 00 365)

Volume discount can be applied. Please contact us.



c4hydro.com

LEGIO EZ-LAB



I HAVE LABORATORY EQUIPMENT:

(glassware, scales, ovens, pH meter, colorimeter, etc.) *

Designation	Reference
Legio EZ-Lab Kit	01 723
96 specific GVPC petri dishes	00 167



Set of reagents required for detection of *Legionella pneumophila* in 48 hours. **Allows 96 analyses to be performed.**

CONTENTS OF THE KIT:

- 96 "3" single-dose vials
- 10 small "S" glass vials
- 96 "6" single-dose vials
- 1 opaque bottle of Solution "7" containing 530 ml
- 10 x 100 ml "Concentrated Wash" bottles
- 96 disposable filtration units in sterile bags containing a filtration membrane
- 96 collecting tubes with plugs

SPECIFIC PETRI DISHES TO BE USED WITH THE KIT:

- 96 GVPC petri dishes (Ref.: 00 167) Staggered delivery of boxes possible (use-by-date : 3 months)

For use with the **C4Hydro filtration manifold**:



Designation	Reference
C4Hydro filtration manifold	00 129

LARGE EQUIPMENT

(Laboratory equipment not supplied with the EZ-Lab Kit but necessary)

- Oven or temperature controlled chamber
- Sterilisation equipment
- Filtration pump with a flow rate between 4 and 10 l/min (or 0.24 to 0.6 m³/h) & vacuum between 0.4 and 0.8 bars (or vacuum between 200 and 400 mbar)
- Incubator 52°C ± 0.5°C
- pH meter

SMALL EQUIPMENT

(Not supplied with the EZ-Lab kit but necessary and available on pages 7 and 8)

- C4Hydro Colorimeter (Ref.: 00 414) or colorimeter (range 340 – 900 nm)
- Macro spectrometry cuvette with cap: C4Hydro cuvette (Ref.: 00 314) or single-use macro cuvette (4-sided transparent, PS material, range 340 – 900 nm)
- Timer (Ref.: 00 113)

CONSUMABLES

(Not supplied with the EZ-Lab kit but necessary)

- Loading solution pH2
- Loading solution pH1
- Sterile purified H₂O
- Ethanol 85%
- Pipettes in different volumes
- Sterile sowing rake
- Sterile tongs

III ➔ I COMPLETE AND RENEW MY EQUIPMENT:



Designation	Reference
C4Hydro filtration manifold	00 129

Option to filter **up to 6 samples** at the same time.
Option for series connection of the ramps in order to increase the number of your analyses.

For use with **the EZ-lab legio kit** (Ref.: 01 723) and a vacuum pump with the following features: Flow between 4 and 10 l/min (or 0.24 to 0.6 m³/h) & vacuum between 0.4 and 0.8 bars (or vacuum between 200 and 400 mbar)



Designation	Reference
Colorimeter	00 414

Reads the absorbency of the sample.

Requires 4 AA batteries (included).

For use with **the EZ-lab legio kit** (Ref.: 01 723) and standard 4.5 ml plastic cuvettes.



Designation	Reference
Temperature recorder	00 404

Allows you to monitor the temperature during incubation.
Downloading of temperature curves via Bluetooth application.
For use with incubator or oven.



Designation	Reference
Timer	00 113

Simple and resistant. Supplied with a battery.



Designation	Reference
Plastic sampling bottle. 500ml	<i>00 384</i>

Used to collect the sample in a sterile, stabilized vial. Contains 20mg of sodium thiosulfate.



Designation	Reference
Anti-bacterial filter 45µm	<i>00 088</i>

Essential to avoid contamination.

Volume discount can be applied. Please contact us.



I WANT TO BE TRAINED:

Designation	Reference
Legio EZ Training	00 321



DURATION:
1 HALF-DAY

1. From sample to result, I learn how to manipulate and use the Multi-Test mobile laboratory with the Legio EZ-Test kit and how to interpret my result.

2. Presentation of the tools and protocol. Familiarization with the equipment and simulation of an analysis.

N.B.: This training can take place in Marseille, in our premises, by video-conference, or in your premises (*cost of travel in France: €500 / EU and non-EU travel on a quotation basis*).

Designation	Reference
Training in legionella sampling	00 556



DURATION:
2 HOURS

1. Training in water sampling techniques.

N.B.: This training can take place in Marseille, in our premises, by video-conference, or in your premises (*cost of travel in France: €500 / EU and non-EU travel on a quotation basis*).



ORDER FORM

Last name, first name:

Company: Tel.:

E-mail:

C4Hydro contact person (if available):

Requested delivery date:

Billing address:

.....

Delivery address (if different):

.....

Designation	Reference	Quantity

An acknowledgement of receipt will be sent to you in return, confirming the terms of delivery and payment.



contact@c4hydro.com



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The general terms and conditions of sale can be consulted on the website:
<https://c4hydro.com/>





Specialist in the detection of
legionellae in water networks within
48 hours.

Solutions that can be used directly
on site or in laboratory.

www.c4hydro.com

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