

- This kit is designed to test for Legionella in risk areas identified by CDC* such as:
- Domestic and industrial hot and cold water systems.
 - Cooling towers.
 - Decorative fountains.
 - Sinks and showers.
 - Hot tubs and pools.
 - Misters, sprinklers, air washers, humidifiers and others.

Instructions

Direct Legionella Field Test™ Kit



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Limit of detection

Laboratory analysis has demonstrated that tests are positive for clean water samples containing 100 CFU/ml *Legionella pneumophila* serogroup 1.

Test operating limits

The test has been evaluated for operation on samples between 10–45°C (50–113°F). A wide range of non-oxidizing biocides and biocides have been checked for cross reaction and interference with the test.

The test should not be used on systems treated with biguanide or tetrakis hydroxymethyl phosphonium sulfate (THPS) based biocides.

Specificity

The test has been shown to be non-reactive with the following bacteria (at 1x10⁸ organisms per sample):

- *Acinetobacter calcoaceticus*
- *Aeromonas hydrophila* subsp. *Hydrophila*
- *Bacillus subtilis*
- *Burkholderia cepacia*
- *Citrobacter freundii*
- *Citrobacter koseri*
- *Enterobacter cloacae*
- *Escherichia coli*
- *Klebsiella oxytoca*
- *Pseudomonas aeruginosa*
- *Pseudomonas fluorescens*
- *Pseudomonas putida*
- *Pseudomonas stutzeri*
- *Ralstonia pickettii*
- *Raoultella terrigena*
- *Streptococcus pyogenes*
- *Yersinia ruckeri*

Organism	≥cfu/mL
L.p Sg-2,3,8,11,13,14	1.00E+08
L.p. Sg-4,5,6,7,9,10,15	1.00E+07
L.p. Sg-12	8.00E+06
<i>S.aureus</i>	2.00E+08

The Hydrosense *Legionella pneumophila* Sg-1 test has been shown to produce weak positive results with other *Legionella pneumophila* serogroups and *S.aureus* at the cfu/mL stated in the above table.

Storage

The test is intended for storage at room temperature 18–22°C (64.4–71.6°F). Do not freeze. When stored correctly, the test will continue to operate within design specification, until the specified expiration date.

Do not use the test after the date specified on the packaging. Do not use any test where the foil packaging is perforated.

Disposal

The test cannot be reused or recycled. The packaging materials and this instruction leaflet can be recycled.

Disclaimer

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Overview

This test is used to detect the presence of *Legionella pneumophila* serogroup 1 bacteria in water samples from a wide range of sources. The test operates via a Lateral Flow Immunochromatographic Assay (LFICA).

Each kit contains the following:

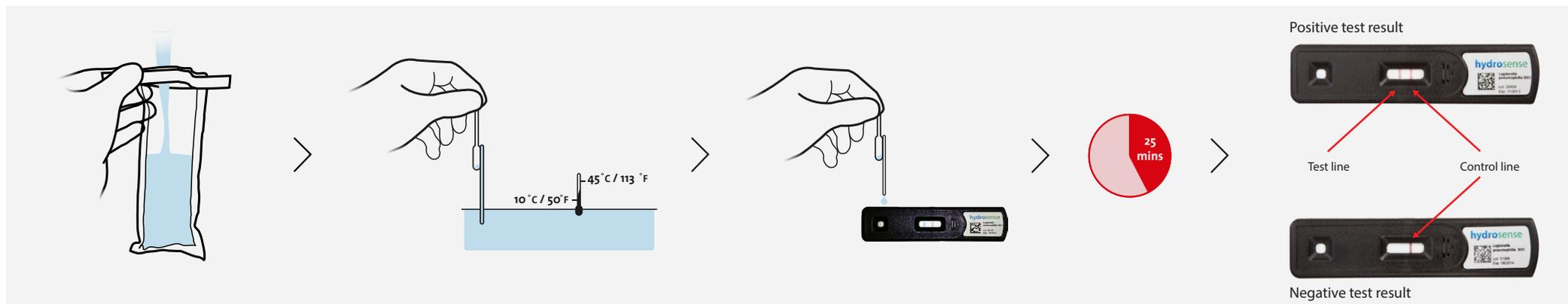
- 10 x individual foil wrapped tests, each with an exact volume pipette.
- 10 x sterile sample bags.

The product is intended for use as part of an overall water treatment, management and risk reduction approach and, as all testing methods including lab culture testing, should NOT be used as the sole method for assessing risks associated with Legionella bacteria.

This test is intended for the analysis of water samples only. It is NOT intended for the diagnostic testing, in a clinical or medical situation, of Legionnaires' Disease in humans.



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For optimum results the test should be performed at room temperature. The foil wrapping should NOT be opened until immediately prior to running the test. If the foil is opened and the test is NOT performed within 60 minutes discard the test.

Step 1: Take a sample

Identify an appropriate sample point from which to obtain a representative sample. Large systems may need to be sampled and tested at multiple locations.

Open the provided sample bag by tearing the perforation just above the white strip. Open the sample bag by grasping and pulling the tab on each side of the bag.

Fill the sample bag from the sample point. (The bag may have condensation inside before use, depending on storage conditions).



Avoid generating aerosols when collecting or handling samples.

Step 2: Add water sample to the test strip

Allow the sample to reach a temperature between 10–45°C (50–113°F).

Remove the test strip from its foil wrapping, and place it on a flat surface.

Place the open end of the pipette into the water sample in the sample bag and then squeeze and release the **top** bulb. This should draw water all the way up the long tube and may place a small amount of sample in the bottom bulb. This is excess and can be ignored. Avoid getting air bubbles in the tube. Empty and refill the pipette if necessary to remove any air bubbles.

Incorrect use of the pipette can cause flooding of the test (too much sample added) or failure to run (insufficient sample added). See the YouTube video for further instructions: <http://bit.ly/HydrosensePipette>

Place the pipette over the small sample window at one end of the strip and then squeeze the **top** pipette bulb again. This will dispense the correct amount of water sample onto the test strip.

RECORD THE TIME. Allow the test to develop at room temperature for 25 minutes. Leave the test strip sitting on a flat surface during development.

Step 3. Interpreting the results

After 25 minutes, examine the test strip in good lighting. The free Hydrosense smartphone app can be used to read the test

accurately and record test results. If the test is not read within 30 minutes of adding the sample, it should be discarded and another test run.

The test should show one of the following results in the large result window on the test strip:

- Two RED lines across the result window. The red line closest to the sample window may be very faint (pale pink). Any distinct line, no matter how faint should be considered to be a POSITIVE result.

OR

- One RED line across the result window at the end furthest from the sample window. This is a NEGATIVE result.

Positive Results

A positive test result indicates that *Legionella pneumophila* serogroup 1 was present in the sample above the detection limit. If a positive result is observed, consult your risk management plan or seek advice from a water management specialist immediately.

Negative Results

A negative result indicates that *Legionella pneumophila* serogroup 1 was not detected and the concentration was below the detection limit of the test.

Invalid Tests

In the unlikely event that a test does not show any red lines, or if it only shows a line at the end closest to the sample window, or if the line furthest from the sample window is very faint, then the test result is invalid. Repeat the test.

Performance Factors

The test does not differentiate between viable and non-viable organisms. The test will detect dangerous viable but non-culturable bacteria, which cannot be detected by traditional laboratory techniques. A positive result does not necessarily mean that viable bacteria are present. A negative result does not necessarily mean that bacteria are totally absent.

The test detects *Legionella pneumophila* serogroup 1.

You can visit www.hydrosense-legionella.com, contact your supplier or email hydrosense@albagaia.com to troubleshoot the test.

Watch the instructional video at <http://bit.ly/Direct Test>