

Specificity

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

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

Staphylococcus aureus and *Legionella pneumophila* serogroups 4 and 7 in samples at concentrations higher than 1x10⁸ organisms per sample may produce weak positive results. These concentrations are higher than would be expected to be present in normal water samples.

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
S.aureus	2.00E+08

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.

Storage

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

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

Disposal

The test, filter, syringe and caps cannot be reused or recycled. The packaging materials and this instruction leaflet can be recycled.

Disclaimer

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Accurate, Immediate Testing for Legionella Bacteria in Your Water.

Filtered Water Test

This test is appropriate for a screening of Humidifiers, Domestic Systems, Cooling Towers, Pools and Spas.

Please visit onsitelegionellatesting.com for an instructional video on how to take this test.

Call (925) 320-3555
for guidance or other questions.

Legionella Field Test: Filtered Water Test

A rapid test intended for the qualitative detection of *Legionella pneumophila* serogroup 1.

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)

Contents:

- 1 - individually wrapped LFICA test strip
- 1 - hollow fibre filter
- 1 - syringe with recovery buffer
- 1 - sample collection beaker
- 1 - 60ml syringe (Luer Lock)

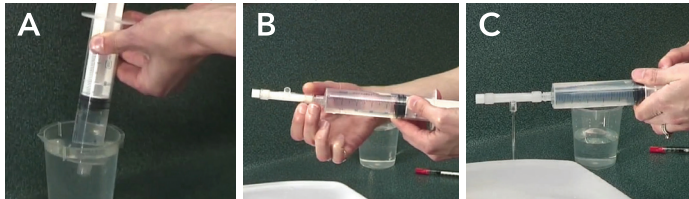
For optimum results the test should be performed at room temperature. The test strip packaging should NOT be opened until immediately prior to running the test.

The product is intended as part of an overall water treatment, management and risk reduction approach and 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 diagnostic testing, in a clinical or medical situation, of legionnaires' disease in humans.

Caution: Avoid generating aerosols when collecting or handling samples.

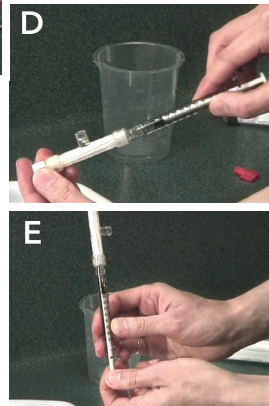
Step 1. Take a sample

Before taking a sample, **flush the sample tap for at least 15 seconds** before filling the sample collection beaker with at least 250ml of water. From the kit, take the 60 ml syringe and draw up 50-60 ml of the sample (A). Remove the Hollow Fibre Filter from the packaging and fix it onto the Luer Lock end of the 60 ml syringe (B). Now filter the sample over a sink by depressing the plunger (C). Repeat this process until all the 250 ml sample has been pushed through, collecting any bacteria in the filter. This should take no longer than 10 minutes.*



Step 2. Recover any bacteria

Disconnect the filter from the 60 ml syringe and discard the syringe. Remove the white cap on the end of the filter and screw it onto the other end of the filter, where the 60 ml syringe had been. Now take the small syringe containing the recovery buffer, remove the red cap and screw it to the open end of the hollow fibre filter (D). Pull the small syringe back to the 0.5 ml mark to re-suspend the recovery buffer, then push the syringe all the way to the 0 ml mark. Repeat this process 2 times. Then draw the syringe back to collect **0.1 ml** of sample. Avoid getting air bubbles in the syringe. *Air bubbles can cause failure for the test to run (insufficient sample added).* (E) Disconnect the hollow fiber filter.



Step 3. Add sample to test strip

Remove the test strip from the zip top bag and place on a flat surface. If the test strip is removed and the test not performed within 60 minutes, discard the test. Before use the test should have 2 pale blue lines across the result window. If these are not present, notify your supplier to replace the test. Place the recovery buffer syringe over the small sample window at one end of the test strip. (F) Depress the plunger to dispense the 0.1ml of recovery buffer, containing any bacteria, onto the test strip. **Record the time.**



Step 4. Interpreting the results

Allow the test to incubate at room temperature on a flat surface. **After 25 minutes**, examine the test strip in good lighting. If the test is not read within 30 minutes of adding the water sample, it should be discarded and a new test should be run. The test should show one of the following results in the larger 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 included. This is a POSITIVE result.

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



Positive Results

A positive test result indicates that *Legionella pneumophila* serogroup 1 bacteria were present in the sample, above the detection limit. The test does not differentiate between viable (living) and non-viable (dead) organisms. The test will detect viable but non-culturable bacteria which are not detectable by traditional laboratory techniques. A positive result does not necessarily mean that viable bacteria are present. **When a positive result is observed, seek advice from your risk management plan, or water treatment specialist immediately.**



Negative Results

A negative result indicates that *Legionella pneumophila* serogroup 1 bacteria were not detected and the concentration was below the detection limit of the test. A negative result does not necessarily mean that bacteria are not present. A negative result does not mean that the system is completely free from risks associated with *Legionella* bacteria. The test only detects *Legionella pneumophila* serogroup 1.

Limit of detection

Laboratory analysis has demonstrated that 98 to 100% of tests are positive for clean water samples containing 100 CFU/liter *Legionella pneumophila* serogroup 1. The theoretical mathematical limit of detection (LOD) of the test is equivalent to 0.1 CFU/ml when a 250 ml sample is filtered. If smaller volumes are processed the detection limit will be altered accordingly. Suspended solid content in water samples affects filtration and test performance, including analytical sensitivity. Actual results will vary, water samples with high levels of suspended solids may block filtration entirely. *L. pneumophila* serogroup 1 bacteria recovery from water samples from <10 to 100%, depending on water sample composition. This is similar to filtration concentration techniques used in other microbiological analysis methods.

* Test operating limits

The test has been evaluated for operation between 50-104°F (10-40°C). The test has been validated for samples that filter in less than 10 minutes. *Samples requiring greater than 10 minutes to filter may give erroneous results.* Samples requiring long periods to filter may be indicative of poor system maintenance. A wide range of non-oxidizing biocides and bio dispersants have been checked for cross reaction and interference with test. **This test should not be used on systems treated with biguanide or tetrakis hydroxymethyl phosphonium sulfate (THPS) based biocides.**