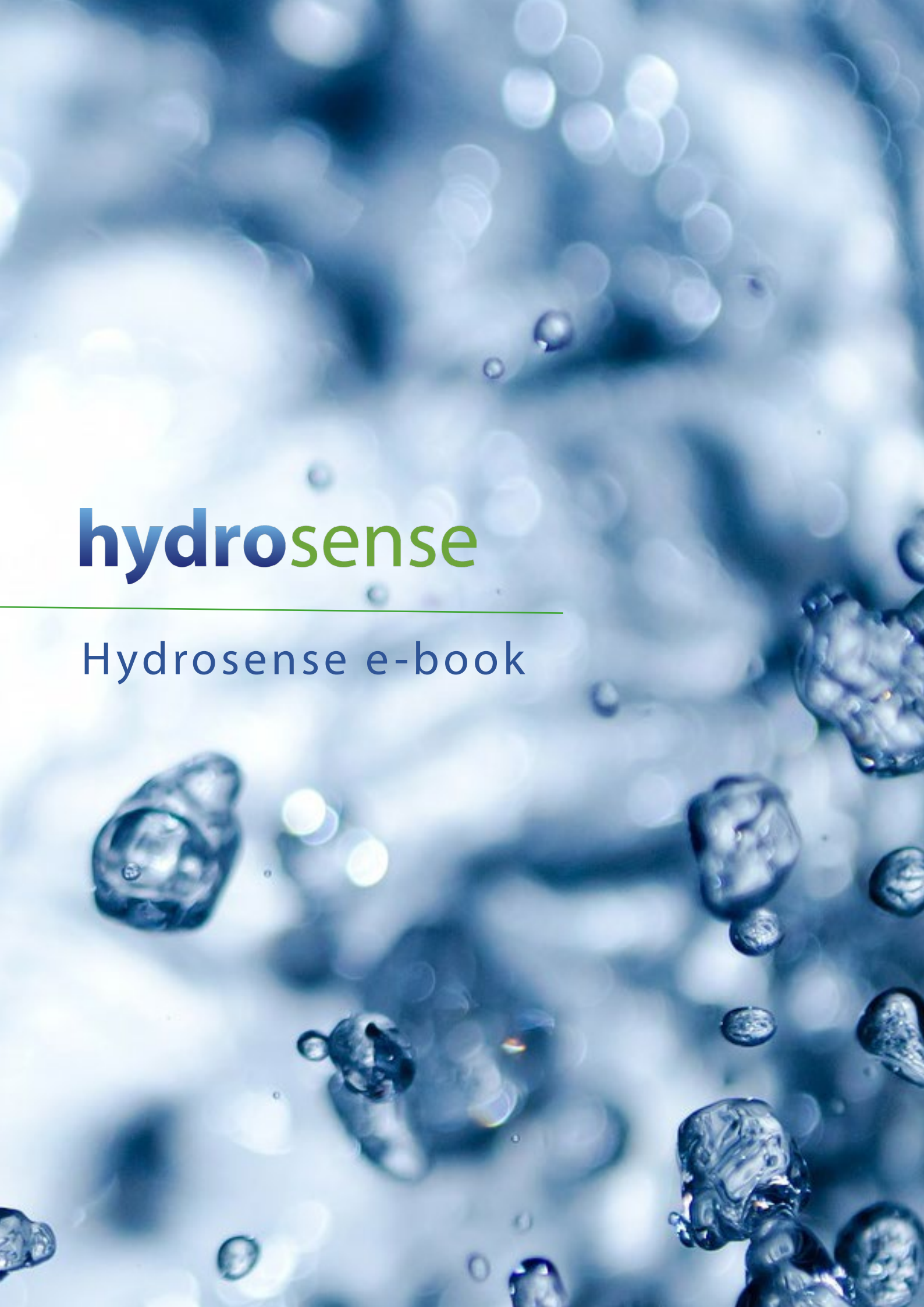


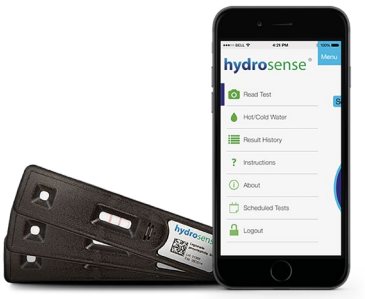
hydrosense

Hydrosense e-book

What we do

Hydrosense is a pioneer in the rapid testing industry, committed to making fast, easy to use, accurate testing for Legionella SG1 widely available. By applying environmental technology to an industrial setting, our specialists have developed a new on-site testing method for the detection of deadly Legionella bacteria in water and biofilm.

Hydrosense is the world's only rapid testing kit for Legionella bacteria, that can be fully conducted on-site, and requires no in-depth training or experience to carry out. The test can be used as part of a superior facilities water management program, or in a domestic setting to ensure the safety of customers and their families. If there is a problem, it is immediately identified, and prompt remedial action can be taken – improving overall public health and protecting businesses from lawsuits, fines reputational damage and shutdowns.



How it Works

Our test is a Lateral Flow Immunochromatographic Assay (LFICA) test. It uses Legionella antibodies, tagged with red nanoparticles, which bind to any bacteria found in a sample, or on a surface, and makes them visible on a line on the device. The Hydrosense test detects Legionella pneumophila serogroup 1 (LpSG1), the strain of Legionella bacterium which causes 70-92% of all cases of infection[4]. Results are read after 25 minutes providing a qualitative answer for the presence or absence of the bacteria.

The test works just like a pregnancy test. One line indicates a negative result and two lines indicate a positive result.

Additionally, the test results can be stored and managed via the Hydrosense Smartphone App. A certificate for conducting the test can also be printed from the secure Hydrosense Pro Portal.

Why Rapid Testing?

Legionnaires' disease is a serious and growing health problem and current risk management methodologies are useful but imperfect. The lab culture technique, for example, is used in almost every industry across the globe for testing of Legionella bacteria in water systems. However, this method takes 7-14 days to provide a result; has a low recovery rate and can produce false negatives or low counts for a wide range of reasons – from sample damage in the transportation process[1] to its inability to detect dangerous Viable-but Non-Cultural (VBNC) bacteria[2].

Unlike the culture method, the Hydrosense test is immediate, simple and accurate; providing insights into the state of your water system in only 25 minutes. There is no need for the transportation of samples and therefore, no risk of samples being damaged en route.

Why Choose Hydrosense?

Our tests were developed and independently validated for use in high-risk areas, such as cooling towers, water tanks, domestic hot and cold-water systems, sinks, showers, decorative fountains, whirlpool spas, pools and many more.

Their incredible convenience, speed and ease of use, make them the first choice for companies where reputation is crucial, where customer and employee safety are paramount, where clients are vulnerable (in care facilities or hospitals for example) or where facilities are in remote locations.

The Hydrosense testing method, when combined with the latest smartphone technology, offers a significantly improved protection profile for employees, customers and the general public.

The Hydrosense Vision

With an on-site test that contributes to improved decision making around Legionella; provides immediate, actionable information on the state of any water system and creates safer environments for employees, customers and the general public – we bring you Hydrosense. It is our starting point, and our goal is to reduce Legionella risk factors to zero.

Reduce Risk

Incidences of Legionnaires' disease are on the rise and conventional lab-based methods for Legionella testing remain dangerously time consuming and are often inaccurate. This combination puts lives at risk.

By minimising the time taken to identify Legionella bacteria, Hydrosense reduces public health risk and helps to save lives.

In parallel with periodic lab culture testing, or as a stand-alone method, this simple test helps your organisation to maintain vigilant control over water system quality.

Get Reliable Results

Other methods of detection, such as **lab culture, can have dangerously low recovery rates**. Even the ISO standard document states recovery rates of only ">64%" for lab culture testing. That's up to 34% inaccuracy[3].

Hydrosense improves the detection rate of Legionella bacteria [LPS1] and provides on-site results within minutes. Additional result verification and recording are provided by our innovative smartphone reader and portal.

Our solution offers secure, accurate and auditable test results that can be saved and shared to create a history of records, a snapshot of immediate risk and a roadmap to prevent future outbreaks.

Protect Reputation

Reputation drives revenue.

Hotels, restaurants, schools, sport and healthcare facilities are just some of the fast-moving environments where water quality can change in a heartbeat. Real time water testing keeps these organisations safe from outbreaks and reputational damage and can help them to avoid huge cuts to their revenues.

For **water service providers**, Hydrosense offers an incredibly useful tool for client peace of mind. The simple test enables engineers to obtain earlier calls to action, while still on-site, and provides assurance that a high standard of service has been achieved, thus improving long-term customer value.

Industries which are reliant on clean water systems, such as **shipping, mining and oil and gas,** have to make sure people are protected in off-shore locations.

Why do Customers use Hydrosense?

- To mitigate public and employee health risks by minimising the time taken to identify Legionella bacteria.
- To immediately identify Legionella SG1, the serogroup which is responsible for almost all cases of potentially deadly Legionnaires' disease[4].
- To maintain vigilant control over their water system quality - If a problem is identified with biocides, water temperature or other controls, or if a responsible person has not been able to cover the facility due to illness or other absence, the rapid test can be taken immediately.
- To record test information and analyse the data. Hydrosense Pro helps customers create a complete picture of Legionella contamination risk and a roadmap to prevent future outbreaks.
- To raise the bar above mere regulatory compliance and protect their reputation from the significant losses that litigation, heavy fines or bad publicity can cause.

"Hydrosense test kits provide our clients with peace of mind, faster. In such a fast-moving environment, real-time water testing helps to keep organisations ahead'.

Steve. Environmental Operational Manager, SPIE UK.

"We have used and supplied Hydronsese for the past 10 years, both as a verification method for regular maintenance activities, and for ongoing system monitoring purposes. This simple, easy to use test has become a valuable tool both to our clients and to EPSCO, as providers of critical system services.

Craig. Operations Manager, EPSCO.

"While lab tests are frequently important for regulatory compliance reasons, it is critical to be able to identify a problem straight away, if it exists"

Chris. Water Mangement for the world's best hotel groups.

The Hydrosense Kit Range

The Legionella Single Syringe Test Kit - 100198

The Hydrosense Legionella Single Syringe Test Kit is the most flexible kit in the Hydrosense range. It allows for water sample testing from any outlet or water source and is highly recommended in high-risk areas such as cooling towers, water tanks, fountains, showers, sinks, cooling towers, spas and pools.

- Sensitivity of 100 CFU/L - Highly sensitive.
- Includes 1 test.
- Water sample can be collected from any source.
- Includes tools that allow filtration of water and concentration of bacteria.

The Legionella Single Syringe EU Test Kit - 100254

The Hydrosense Legionella Single Syringe Test Kit also comes in an EU version, which allows for testing of Legionella at levels that are considered dangerous by European regulation. The test has two specific action levels: a score of 1 or greater ≥ 1000 CFU and a score of 6 or greater ≥ 10,000 CFU/L.

The Hydrosense Legionella Industrial Test Kit - 100182

The Hydrosense Legionella Industrial Test Kit is ideal for facilities where repeated sampling is required. The kit includes an industrial sample point that can be fitted into standard plumbing connections. This sample point allows for faster and more convenient filtration of water samples and is recommended for high-risk areas such as cooling towers, showers, water tanks and pipe fittings in domestic and industrial water systems.

- Sensitivity of 100 CFU/L - Highly sensitive.
- Includes 5 tests.
- Water sample is collected via sample point pipe fitting adaptor with 1/2" and 3/4" female threaded connectors. Note that this can also connect to a shower head thread.
- Includes tools that allow filtration of water and concentration of bacteria.

The Hydrosense Legionella Industrial EU Test Kit - 100264

The Hydrosense Legionella Industrial Test Kit also comes in an EU version, which allows for testing of Legionella at levels that are considered dangerous by European regulation. The test has two specific action levels: a score of 1 or greater ≥ 1000 CFU and a score of 6 or greater ≥ 10,000 CFU/L.

The Hydrosense Legionella Swab Test Kit - 100144

The Hydrosense Legionella Swab Test Kit allows for sampling of biofilm, scale and sludge found on surfaces where Legionella can often grow. It is very useful for locating the source of infection and is recommended for testing surfaces of cooling towers, water tanks, sinks, showers, misters, sprinklers, air washers, humidifiers and others.

- Sensitivity of 200 CFU per swabbed area.
- Comes in packs of 1 or 5.
- Sample is collected by swabbing the surface where biofilm grows.

The Hydrosense Legionella Risk Assessment Test Kit - 100202

The Hydrosense Legionella Risk Assessment Test Kit allows testing of both water samples and biofilm. Perfect for risk assessments, is highly useful for identifying the source of infection and is recommended for testing water samples and surfaces of cooling towers, fountains, water tanks, sinks, showers, misters and spas and pools.

- Includes 2 Single Syringe (water) Tests and 2 Single Swab (biofilm) Tests.
- Single Syringe water test includes tools that allow filtration of water and concentration of bacteria.

The Hydrosense Legionella Risk Assessment EU Test Kit - 100263

The Hydrosense Legionella Risk Assessment Test Kit also comes in an EU version, which allows for testing of Legionella at levels that are considered dangerous by European regulation. The test has two specific action levels: a score of 1 or greater ≥ 1000 CFU and a score of 6 or greater ≥ 10,000 CFU/L.

The Hydrosense Legionella Direct Test Kit - 100104

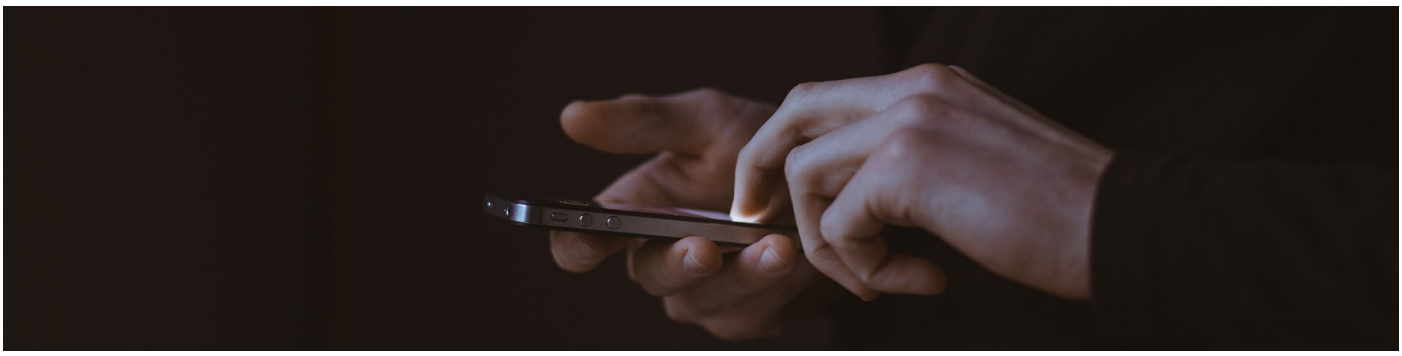
The Hydrosense Legionella Direct Test Kit allows for more frequent sampling at a lower sensitivity. Because of it's lower sensitivity, this kit is not recommended for very high-risk industries such as hospitality, healthcare or cooling towers.

- Sensitivity of 100,000 CFU/L
- Includes 10 tests.
- Very flexible and simple to carry out.
- Water sample can be collected from any source.

Hydrosense Pro

All Hydrosense customers have free access to the Hydrosense Pro App and Portal, which offers real-time reading of tests and connectivity between locations and individuals. The App can read the test accurately and provides semi-quantified results. Recorded information on location, time, and the type of system being tested allows identification of areas of increased risk. Consequently, enabling the user to effectively mitigate any risks by making better-informed decisions.

The data collected by the App is automatically synchronised with the Portal and real-time integration ensures that a track record is kept of all results, helping duty holders to identify future trends. It is also possible for users to produce and print and a certificate of completion which they can add to risk assessment records for audit purposes.



Hydrosense is the world's fastest and only on-site Legionella test. It can provide critical information on Legionella pneumophila SG1 bacteria, including dangerous Viable But Non-Culturable (VBNC) bacteria, and give more timely results, thus minimising Legionella risks significantly.
This simple test allows any organisation to maintain vigilant control over their water system quality and when combined with Hydrosense Pro technology, provides the fastest way to progress from taking a water sample to delivering an actionable result to the duty holder.

Smarter test. Safer Water.

Enquire now

References

1. McCoy, W., Chen, K., Neville, M., Devender, S., Downes, E., Leonidas, L., Cain, M. and Sherman, D. (2012). Inaccuracy in Legionella tests of building water systems due to sample holding time. Water Research, [online] 46(11), pp.3497-3506. Available at: https://www.sciencedirect.com/science/article/pii/S0043135412002369 [Accessed 17 Apr. 2018].

2. Dietersdorfer, E., Kirschner, A., Schrammel, B., Ohradanova-Repic, A., Stockinger, H., Sommer, R., Walochnik, J. and Cervero Aragó, S. (2018). Starved viable but non-culturable (VBNC) Legionella strains can infect and replicate in amoebae and human macrophages. Water Research. [online] Available at: https://www.sciencedirect.com/science/article/pii/S0043135418300721 [Accessed 17 Apr. 2018].

3. Water quality — Enumeration of Legionella. (2017). ISO International Standard, (11731).

4. Mercante, J. And Winchell, M. (2015). Current and Emerging Legionella Diagnostics for Laboratory and Outbreak Investigations. [online]. Available at: https:// www.ncbi.nlm.nih.gov/pmc/articles/PMC4284297/ [Ac- cessed 6 May 2018].

5. Jernigan, D., Hofmann, J., Cetron, M., Nuorti, J., Fields, B., Benson, R., Breiman, R., Lipman, H., Carter, R., Genese, C., Paul, S., Edelstein, P. and Guerrero, I. (1996). Outbreak of Legionnaires' disease among cruise ship passengers exposed to a contaminated whirlpool spa. [online] The Lancet. Available at: https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(96)91137-X/abstract [Accessed 29 May 2018].