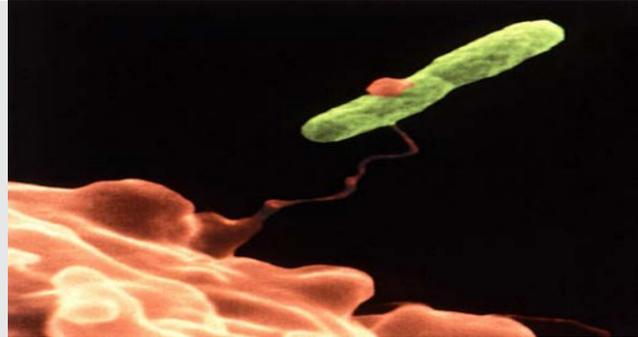


# LEGIONELLA

## Risk Assessment



Legionnaires' Disease, a potentially fatal disease resulting from being infected with Legionella bacteria, is a form of pneumonia. Certain sectors of the general population are more susceptible to the organism, such as the elderly, immunosuppressed and immunocompromised persons, people with health conditions and smokers.

Legionella bacteria occur naturally, in low numbers in water bodies such as rivers, lakes and reservoirs in temperatures between 0°C and 60°C. Since they are naturally present in such water bodies, they can end up entering man-made water distribution systems, where they can then reproduce and thrive on the available nutrients and the favourable conditions within these systems. The organism can infect humans when water is aerosolized into airborne droplets and the organism is dispersed along with these aerosols.

Water systems that pose the greatest risk to the public are those systems that aerosolize potentially contaminated water. These include cooling towers, spas, showers, fountains and garden sprinkler systems, etc. For example, cooling towers can spread aerosols in the air, up to a 5km radius from the unit, depending on the atmospheric conditions.

### Regulatory Requirements

The Department of Health in South Africa has listed Legionnaires' disease as a 'Notifiable Disease'; this means that any suspected cases must be reported to the local authority.

Under the South African Occupational Health and Safety Act, No 85 of 1993 (OHS Act) there is a section specifically for hazardous organisms; this is referred to as the Hazardous Biological Agents Regulations (HBA). The HBA regulations are all encompassing and express the need for Risk Assessment, adequate training, monitoring and record keeping.

In general, Legionella is classified under Group 2 HBA, but wherever there are immune compromised individuals known to be present (such as hospitals and clinics) it is classified as Group 3 HBA. The HBA classifies organisms based on their consequences to humans and their likelihood of being present and posing a real risk.

Based on all the information above we recommend that the first step to prove your due diligence is to perform a comprehensive **LEGIONELLA RISK ASSESSMENT**.

#### • What is a risk assessment?

A Legionella Risk Assessment involves a site inspection to evaluate the condition of the water system, building layout, and risk of aerosol generation. The water treatment scheme, current water monitoring plan and the staff training records should also be assessed.

#### • What are potential risk systems?

- Evaporative Condensers such as Cooling Towers
- Domestic water systems, e.g. hot and cold water systems
- Spa pools
- Misting devices
- Air washers
- Emergency showers
- Powered Dental equipment
- Irrigation systems
- Tunnel pasteurizers
- Spray humidifiers
- Vehicle washers
- Industrial effluent treatment plants
- Horticultural misting systems

#### • Swift Silliker can offer the following services

- **Legionella risk assessment**  
Our experienced consultants can assist you with a complete Legionella Risk Assessment. This comprises of an on-site visual inspection. We then provide a complete report and a logbook to aid further ongoing monitoring.
- **Monitoring program**  
A customised programme is developed, based on the findings of the risk assessment.
- **Sampling**  
This is performed by one of Swift Silliker's registered Environmental Health Practitioners to ensure correct sampling techniques are used and samples are preserved and transported correctly.
- **Accredited Analysis**  
We are able to analyse the collected samples using one of the following methods:
  - Enumeration of Legionella (ISO 11731)
  - Legionella screening method
- **Follow-up Inspections / Consultation**  
During these visits, we evaluate the use of the Logbook and monitor laboratory results. Constructive advice is offered to ensure compliance with HBA Regulations.
- **Comprehensive Legionella Training**  
We are able to offer a 4-hour training course on LEGIONELLA monitoring which touches on the aspects covered in the Approved Code of Practice on Legionnaires' Disease. This course is best suited to improve the risk knowledge of maintenance staff.
- **Management Training and Awareness on Legionella**  
This 1-hour course explains what the South African Regulations require of you as an Employer and what Legionella is.
- **Legionella Awareness Training**  
This 1-hour information session explains what Legionella is and what should you know.

#### Did you Know:

- ▶ That three people died from Legionnaires' Disease in Spain in September 2014?

#### Did you Know:

- ▶ That in 2007 there was a Legionella outbreak in South Africa?

#### Did you Know:

- ▶ That a man in Cape Town was diagnosed with legionellosis in November 2013?

#### Did you Know:

- ▶ That Swift Silliker offers various consulting and auditing services?  
<http://swift.co.za/audit.php>

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