

PATHOGEN SAFETY DATA SHEET

Legionella pneumophila

CHARACTERISTICS	
Morphology	Gram negative aerobic bacterium of the Legionellaceae family.
Disease	Legionnaires' disease, a severe form of pneumonia. The symptoms of Legionnaire's disease include confusion, headache, diarrhea, abdominal pain, fever, chills, and myalgia as well as a non-productive cough
Zoonosis	None

HEALTH HAZARDS	
Host Range	Humans and animals
Modes of Transmission	Can be transmitted through aerosols and aspiration of contaminated water.
Signs and Symptoms	Can cause a severe form of pneumonia. Symptoms include confusion, headache, diarrhea, abdominal pain, fever, chills, and myalgia as well as a non-productive cough.
Infectious Dose	unknown
Incubation Period	unknown

MEDICAL PRECAUTIONS/TREATMENT	
Prophylaxis	None available
Vaccines	None available
Treatment	Respiratory fluoroquinolones and the newer macrolides are used.
Surveillance	Monitor for symptoms. Diagnosis can be confirmed via identification of <i>L. pneumophila</i> , often isolated from respiratory secretions, by culturing, immunofluorescent staining, urine antigen tests, PCR, or serologic tests
MSU Requirements	Report any exposures

LABORATORY HAZARDS	
Laboratory Acquired Infections (LAIs)	1 case
Sources	Expectorated sputum, lower respiratory specimens, pleural fluid, and blood. Other sources include water samples from water systems and fresh water sources. Cultures, frozen stocks, other samples described in IBC protocol.

SUPPLEMENTAL REFERENCES	
Canadian MSDS:	http://www.phac-aspc.gc.ca/lab-bio/res/psds-ftss/index-eng.php
BMBL	https://www.cdc.gov/labs/BMBL.html
CDC	https://www.cdc.gov/legionella/index.html
NIH Guidelines	https://osp.od.nih.gov/wp-content/uploads/NIH_Guidelines.pdf

RISK GROUP & CONTAINMENT REQUIREMENTS	
Risk Group 2	Agents that are associated with human disease which is rarely serious and for which preventive or therapeutic interventions are often available.
BSL2	For all procedures involving suspected or known infectious specimen or cultures.
ABSL2	For all procedures utilizing infected animals.

SPILL PROCEDURES	
Small	Notify others working in the lab. Remove PPE and don new PPE. Cover area of the spill with absorbent material and add fresh 1:10 bleach:water. Allow 20 minutes (or as directed) of contact time. After 20 minutes, cleanup and dispose of materials.
Large	<ul style="list-style-type: none"> Immediately notify all personnel in the lab and clear all personnel from the area. Remove any contaminated PPE/clothing and leave the lab. Secure the area by locking doors, posting signage and guarding the area to keep people out of the space. For assistance, contact MSU's Biosafety Officer (406-994-6733) or Safety and Risk Management (406-994-2711).

EXPOSURE PROCEDURES	
Mucous membrane	Flush eyes, mouth, or nose for 5 minutes at eyewash station.
Other Exposures	Wash area with soap and water for 5 minutes.
Reporting	Immediately report incident to supervisor, complete a First Report of Injury form, and submit to Safety and Risk Management.
Medical Follow-up	During business hours: Bridger Occupational Health 3406 Laramie Drive Weekdays 8am -6pm. Weekends 9am-5pm After business hours: Bozeman Deaconess Hospital Emergency Room 915 Highland Blvd

VIABILITY	
Disinfection	Susceptible to 1:10 bleach:water, 70 % ethanol and formaldehyde.
Inactivation	Inactivated by moist heat (15 minutes at 121°C) and dry heat (1 hour at 170°C).
Survival Outside Host	Is found naturally in most fresh water sources, including lakes, ponds and rivers. Can survive up to 139 days in distilled water and 415 days in tap water.

PERSONAL PROTECTIVE EQUIPMENT (PPE)	
Minimum PPE Requirements	Lab coat, disposable gloves, safety glasses, closed toed shoes, long pants
Additional Precautions	Additional PPE may be required depending on lab specific SOPs and IBC Protocol.