

# PATHOGEN SAFETY DATA SHEET

Agent Name: **Anaplasma phagocytophilum**

AGENT CHARACTERISTICS	
<i>Morphology</i>	Obligate, intracellular, Gram-negative bacterium with tropism for neutrophils.
<i>Zoonosis</i>	Yes, usually through (black-legged) tick bites.
<i>Diseases</i>	Anaplasmosis, Human granulocytic anaplasmosis (HGA).

VIABILITY	
<i>Disinfection</i>	Use 10 % Bleach (min. 0.3% sodium hypochlorite); or 70 % ethanol.
<i>Physical Inactivation</i>	Autoclave and dispose of as Regulated Medical Waste (RMW). See waste information for disposal of solid and liquid waste.
<i>Survival Outside of Host</i>	Stages die within hours if not kept in optimum conditions. Sensitive to moist heat (121°C for at least 15 min.) and dry heat (160-170°C) for at least 1 hour.

HEALTH HAZARDS	
<i>Host Range</i>	Rodents, ticks, humans, horses, sheep.
<i>Modes of Transmission in the Lab</i>	Exposure to open wounds, accidental injection into skin.
<i>Signs and Symptoms</i>	Nonspecific febrile illness characterized by highgrade fever, rigors, generalized myalgias, severe headache, and malaise often accompanied by thrombocytopenia, leukopenia, and elevated liver transaminases occurs approximately 5-21 days after a bite from an infected tick. • Anorexia, arthralgias, nausea, nonproductive cough, and rash are sometimes present. • Median duration of illness is 9 days (1-60 days). The bacteremia lasts for days to a few weeks after the occurrence of symptoms.
<i>Infectious Dose</i>	Unknown.
<i>Incubation Period</i>	7-10 days from tick bite to bacteremia and acute symptoms.

LABORATORY HAZARDS	
<i>Laboratory Acquired Infections (LAIs)</i>	No cases reported.
<i>Sources</i>	Cultures, frozen stocks, other samples described in IBC protocol.

MEDICAL-RELATED INFORMATION	
<i>Prophylaxis Availability</i>	Tetracyclines (e.g., doxycycline) and rifamycins.
<i>Vaccine Availability</i>	None.
<i>Medical Information</i>	You should inform the physician of any drug resistance(s) acquired by the lab strain(s) and any sequences inserted into the lab strain(s).
<i>Surveillance</i>	Monitor for symptoms of infection (see "Health Hazards")
<i>VT Requirements</i>	Immediately report any exposures to Occupational Health.

WASTE INFORMATION	
<i>Waste Disposal</i>	Refer to the EHS <a href="#">Laboratory Waste Charts</a> for details on disposal of biohazardous waste.

CONTAINMENT REQUIREMENTS	
<i>BSL-2</i>	All procedures must be performed in a BSC, unless otherwise approved and stated in lab-specific manual.
<i>ABSL-2</i>	For all procedures utilizing infected animals.
<i>ACL-2</i>	For all procedures utilizing infected arthropods.
<i>BL2/BLN-2/BLP-2</i>	Follow all applicable <i>NIH Guideline</i> requirements.
<i>RG2</i>	Agents that are associated with human disease which is rarely serious and for which preventive or therapeutic interventions are <i>often</i> available.

MINIMUM PPE	
<i>Minimum Requirements</i> See <a href="#">Section 4.6 of UBM</a> for details	<ul style="list-style-type: none"> <li>Tie back hair and wear closed-toe shoes, street clothing fully covering legs, lab coat, disposable gloves.</li> <li>Additional requirements listed in <a href="#">Section 15</a> of your lab-specific biosafety manual must be followed.</li> </ul>
<i>Additional Precautions</i>	If centrifuge is outside of BSC and rotors are not sealed, wait 5 minutes after centrifuge completely stops before opening centrifuge.

SPILL INFORMATION	
<i>Small</i> (Refer to <a href="#">Section 3 of the LSBM</a> for details on clean-up)	Notify others working in the lab. If contaminated, remove PPE and don new PPE. Follow spill procedures in <a href="#">Section 3</a> of the Lab-specific Biosafety Manual.
<i>Large</i> (Refer to <a href="#">Section 1.8 of the UBM</a> for details on clean-up)	<ul style="list-style-type: none"> <li>Immediately notify all personnel in the lab and clear all personnel from the area. Remove any contaminated PPE/clothing and leave the lab.</li> <li>Secure the area by locking doors, posting signage and guarding the area to keep people out of the space.</li> <li>Call 911 or non-emergency Campus Police (231-6411) and ask to notify EHS. Inform the PI or Lab Manager/ Supervisor as soon as possible.</li> </ul>

EXPOSURE INFORMATION	
<i>Eyes and Mucous Membranes</i> (See <a href="#">section 1.3 and 1.5 of UBM</a> for details)	<ul style="list-style-type: none"> <li>Flush eyes for 5-10 minutes at eyewash station.</li> <li>Immediately flush membranes with plain water.</li> <li>Go to an appropriate health care provider. Bring a copy of this PSDS.</li> </ul>
<i>Needle sticks and open wounds</i> (See <a href="#">section 1.3 and 1.5 of UBM</a> for details)	<ul style="list-style-type: none"> <li>Clean and wash area thoroughly with soap and water, for a minimum of 5 minutes.</li> <li>For a needlestick, gently massage the area to make it bleed while washing.</li> <li>Go to an appropriate health care provider. Bring a copy of this PSDS.</li> </ul>

REFERENCES & SOURCES
<a href="#">Montana State University; Biosafety Program</a>
<a href="#">Canadian PSDS and Risk Assessment</a>
<a href="#">BMBL; 5th Edition</a>
<a href="#">CDC</a>
<a href="#">NIH Guidelines</a>

LAB-SPECIFIC INFORMATION: Check ALL responses applicable to your lab:	
<input type="checkbox"/>	I have reviewed the above information and my lab will follow all requirements as described above.
<input type="checkbox"/>	I have reviewed the above information and my lab will follow all requirements as described above with the <b>following changes</b> specific to my lab: