

## PATHOGEN SAFETY DATA SHEET

### Toxoplasma gondii

CHARACTERISTICS	
Morphology	Obligate intracellular parasitic protozoa
Disease	Typically, non-pathogenic in immunocompetent adults but can be severe in immunocompromised people. Can cause acute infection, retinochoroiditis, encephalitis, and congenital infection.
Zoonosis	Yes, from direct or indirect exposure of mucous membranes to oocysts of infected animals. Humans are intermediate hosts.

HEALTH HAZARDS	
Host Range	Cats and other felines, humans, mammals, birds, flies and cockroaches.
Modes of Transmission	Ingestion of contaminated food, water, and contaminated milk. Inhalation of aerosols containing oocysts.
Signs and Symptoms	Symptoms include fever, rash, headache, lymphadenopathy, organomegaly, weight loss, weakness, pneumonia, and myalgia.
Infectious Dose	Unknown
Incubation Period	Unknown

MEDICAL PRECAUTIONS/TREATMENT	
Prophylaxis	A treatment of sulfadiazine-pyrimethamine and folic acid.
Vaccines	None available.
Treatment	Antibiotic therapy spiramycin, sulfadiazine, and folic acid.
Surveillance	Monitor for symptoms and confirm by positive serology for antibodies.
MSU Requirements	Report any exposures

LABORATORY HAZARDS	
Laboratory Acquired Infections (LAIs)	47 cases have been reported with one death.
Sources	May be present in blood, saliva, sputum, urine, milk, feces, and tissue. Cultures, frozen stocks, other samples described in IBC protocol.

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

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"> <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> </ul> 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 <a href="#">First Report of Injury</a> form, and submit to Safety and Risk Management.
Medical Follow-up	<p><b>During business hours:</b>            Bridger Occupational Health 3406 Laramie Drive            Weekdays 8am -6pm. Weekends 9am-5pm</p> <p><b>After business hours:</b>            Bozeman Deaconess Hospital Emergency Room            915 Highland Blvd</p>

VIABILITY	
Disinfection	Susceptible to 1:10 bleach:water, 70 % ethanol and 10% formalin
Inactivation	Inactivated by moist heat (15 minutes at 121° C) and dry heat (1 hour at 160-170° C), short wave UV, and gamma irradiation.
Survival Outside Host	Can survive in moist soil or water for up to 18 months.

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.