# Pathogen Safety Data Sheet

## Toxoplasma gondii

### Characteristics

<table>
<thead>
<tr>
<th>Natural Source</th>
<th>Obligate intracellular parasitic protozoa</th>
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<tbody>
<tr>
<td>Growth Conditions</td>
<td>Tissue culture</td>
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### 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 folinic acid.

#### Vaccines
- None available.

#### Treatment
- Antibiotic therapy spiramycin, sulfadiazine, and folinic acid.

#### Surveillance
- Monitor for symptoms and confirm by positive serology for antibodies.

### 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.

### Containment Requirements

- **BSL2**
  - For all procedures involving clinical samples or bacterial culture.

- **ABSL2**
  - For all procedures involving animals infected with T. gondii.

### Spill Procedures

#### Small
- Notify others working in the lab. Remove and don new PPE. Cover area of the spill with absorbent material and add 10% Bleach. Allow 30 minutes hour of contact time. After 30 minutes and then cleanup and dispose of materials.

#### Large
- For assistance, contact MSU’s Biosafety Officer (406-994-6998) 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 report, and submit to Safety and Risk Management.

#### During business hours:
- Montana Occupational Health
  - 2075 Charlotte St. Suite 3
  - Bozeman, MT

#### After business hours:
- Bozeman Deaconess Hospital
  - Emergency Room
  - 915 Highland Blvd
  - Bozeman, MT

### Viability

#### Disinfection
- Susceptible to 10% Bleach, 70% ethanol, and 10% formalin.

#### Inactivation
- Inactivated by moist heat (15 minutes at 121°C), 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. Can survive

### Personal Protective Equipment (PPE)

#### Minimum PPE Requirements
- At minimum, gloves, closed toed shoes, lab coat, and appropriate face and eye protection prior to working with T. gondii. Additional PPE may be required depending on lab specific SOPs.

#### Additional Precautions
- None required

### Supplemental References

- CDC: [http://www.cdc.gov/parasites/toxoplasmosis/](http://www.cdc.gov/parasites/toxoplasmosis/)