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| **CHARACTERISTICS** | |
| Morphology | Gram negative rod non-spore forming bacteria. |
| Disease | Typical Enteropathogenic E. coli (EPEC) primarily causes disease in neonates and young children, with most cases occurring in children < 2 years old and  particularly in those < 6 months old. Disease may occur in adults if sufficiently high inocula are ingested. Outbreaks have occurred in pediatric wards, nurseries, and day care centers and in adults that have consumed contaminated food from a buffet. In  developing countries, EPEC are highly prevalent and are an important cause of childhood diarrheal disease and dehydration-associated deaths. |
| Zoonosis | May be transmitted when handling infected cattle, dogs, cats, sheep, rabbits, and horses. |

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| **HEALTH HAZARDS** | |
| Host Range | Humans and animals. |
| Modes of Transmission | Ingestion of contaminated food, fecal-oral transmission, and person-to-person transmission. |
| Signs and Symptoms | Low grade fever with nausea, diarrhea, and vomiting may be present. Stools are typically not bloody, mucoid, or dysenteric. |
| Infectious Dose | Estimated to be around 1 million organisms. |
| Incubation Period | 6-48 hours. |

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| **MEDICAL PRECAUTIONS/TREATMENT** | |
| Prophylaxis | None. |
| Vaccines | None. |
| Treatment | Electrolyte fluid therapy. Trimethoprim/sulfamethoxazole or quinolones reduces the duration of diarrhea. |
| Surveillance | Monitor for symptoms. |
| MSU Requirements | Report any exposures. |

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| **LABORATORY HAZARDS** | |
| Laboratory Acquired Infections (LAIs) | 12 reported cases. |
| Sources | Contaminated food and feces. Cultures, frozen stocks, other samples described in IBC protocol. |

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| **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. |

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| **VIABILITY** | |
| Disinfection | Susceptible to 1:10 bleach:water, 70 % ethanol, and glutaraldehyde, accelerated hydrogen peroxide. |
| Inactivation | Inactivated by moist heat (1 hour at 121oC) and dry heat (1 hour at 160-170 C). |
| Survival Outside Host | Can survive for 1.5 hours to 16 months on dry inanimate surfaces. |

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| **SUPPLEMENTAL REFERENCES** | |
| BMBL | <https://www.cdc.gov/labs/BMBL.html> |
| NIH Guidelines | <https://osp.od.nih.gov/wp-content/uploads/NIH_Guidelines.pdf> |
| Canada PSDS | <https://www.canada.ca/en/public-health/services/laboratory-biosafety-biosecurity/pathogen-safety-data-sheets-risk-assessment/escherichia-coli-enteropathogenic.html> |

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| **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 | * 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). |

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| **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](https://firstreportinjury.mus.edu/) form, and submit to Safety and Risk Management. |
| Medical Follow-up | **During business hours:**  Bridger Occupational Health 3400 Laramie Drive Weekdays 8am -6pm. Weekends 9am-5pm  406-577-7674  **After business hours:**  Bozeman Deaconess Hospital Emergency Room  915 Highland Blvd |

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| **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. |