



The University of Texas at Tyler
Environmental Health and Safety
BIOLOGICAL AGENT REFERENCE SHEET

Characteristics	
Risk Group	1 - Agents that are not associated with disease in healthy adult humans. These agents represent no or little risk to an individual and no or little risk to the community.
Agent Type	Biohazard
Description	<p>Proteus mirabilis is a Gram-negative, aerobic, motile, rod-shaped bacterium. It is found in normal gut flora but is an opportunistic pathogen, being the causative agent in urinary tract infections. Research shows this pathogen is resistant to ampicillin and other less modern antibiotics.</p> <p>ref. Proteus mirabilis and Urinary Tract Infections. Microbiol Sprct. 2016; Proteus mirabilis. NCBI. Genome;</p>
Host Range	Humans
Exposure route	Contact on broken skin or mucous membranes
Incubation period	unknown

Laboratory Hazards	
High Energy	Centrifugation, sonication, vortexing

Sharps	Needles, broken glass
Aerosols	Shaking, liquid culturing, pipetting, coughing, sneezing
Equipment	Easily adhere to and stay on unsanitary equipment
Exposed body	skin, eyes, mucous membranes
Notes	

Laboratory Handling Guidelines	
Biosafety Level	1 - refer to Biosafety Manual; contact EH&S for a copy
Training	EH&S Biosafety Training; Lab specific training
Engineering controls	recommended use in BSC II
PPE	Eye protection, gloves and lab coat
Waste	Biohazard - put in red biohazard bins

Agent Viability	
Disinfection	10% bleach, 70% ethanol
Survival outside host	The bacterium can survive in multiple environments for long periods of time.
Engineering controls	BSC if working with liquids; lids while working with high energy equipment
PPE	Eye protection, gloves, long sleeve or lab coat
Waste	Biohazard - put in red biohazard bins

Exposure and Spill procedures	
Mucous membranes	flush eyes, nose, mouth/throat for 15 minutes
Skin contact	Wash with soap and water for a minimum of 30 second for bare skin contact; for broken skin wash with soap and water for 15 minutes
Minor (small) spills	Notify all persons present in the area. Allow aerosols to settle. While wearing protective clothing, gently cover the spill with absorbent paper towel and apply appropriate disinfectant, starting at perimeter and working towards the centre. Allow sufficient contact time before clean up.
Major (large) spills	Contact EH&S immediately; after-hours contact University Police
Waste	Decontaminate all wastes before disposal by incineration, chemical disinfection or steam sterilization

References

<https://www.canada.ca/en/public-health/services/laboratory-biosafety-biosecurity/pathogen-safety-data-sheets-risk-assessment/tearsheet-proteus.html>