



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

Characteristics	
Risk Group	2 - Agents that are associated with human disease which is rarely serious and for which preventive or therapeutic interventions are often available.
Agent Type	Biohazard
Description	<p><i>Providencia stuartii</i> is a Gram-negative Enterobacterium found in soil, water and sewage. The bacterium is mobile via flagella, is non-spore forming, non-lactose fermenting, catalase positive and oxidase negative. It can grow through fermentation and anaerobic conditions. <i>P. stuartii</i> is used in for many experimental purposes in laboratories. This bacterium is an opportunistic pathogen responsible for human infections including urinary tract infection and hospital acquired infections.</p> <p>ref: <i>Providencia stuartii</i>; https://eol.org/pages/972760/articles; http://www.antimicrobe.org/b227.asp</p>
Host Range	Humans; cows can be vectors for the disease
Exposure route	Aerosol/inhalation, direct contact
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 urinary cathet
Exposed body	Skin, eyes, mucous membranes
Notes	Multidrug resistant but suseptable to 3d generation cephalosporins

Laboratory Handling Guidelines

Biosafety Level	2 - refer to Biosafety Manual; contact EH&S for a copy
Training	EH&S Biosafety Training; Lab specific training
Engineering controls	use in BSL II only
PPE	Eye protection, gloves and lab coat
Waste	Biohazard - put in red biohazard bins

Agent Viability

Disinfection	1% bleach, 70% ethanol
Survival outside host	unknown
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

<http://www.antimicrobe.org/b227.asp> ; https://microbewiki.kenyon.edu/index.php/Providencia_stuartii

