



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>Candida albicans</i> is a fungus of the family Candidaceae. It is an encapsulated diploid and polymorphic fungus depending on environmental conditions. The fungus is an opportunistic pathogen but readily inhabits the GI tract, respiratory tract, and female genitalia in humans in a commensal form. It is the most common fungal infection in humans and the most susceptible to disease are immunocompromised individuals. Treatment includes voriconazole (recommended) but also with caspofungin. It can be resistant to fluconazole. One laboratory acquired infection has been reported.</p> <p>ref: <i>Candida albicans</i>. Genome. NCBI; https://www.canada.ca/en/public-health/services/laboratory-biosafety-biosecurity/pathogen-safety-data-sheets-risk-assessment/candida-albicans-pathogen-safety-data-sheet.html;</p>
Host Range	Humans
Exposure route	Aerosol/inhalation; mucous membrane contact; individual's flora
Incubation period	unknown

Laboratory Hazards	
High Energy	Centrifugation, sonication, vortexing

Sharps	
Aerosols	Shaking, liquid culturing, pipetting, coughing, sneezing
Equipment	Can adhere to laboratory equipment from 24 hours to 120 days
Exposed body	oral and nasal respiratory tracts; female genitalia
Notes	C. albicans can survive on hands for 45 minutes; isolated from fabrics and sinks

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	2% iodine and 4% potassium iodide for 30 seconds; 70% ethanol; 10% bleach
Survival outside host	The fungal spores can survive in soil and decomposing vegetation and are heat resistant.
Engineering controls	BSC; 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/candida-albicans-pathogen-safety-data-sheet.html>