

Category B Agents

Organism	Disease	Transmission	Lab tests	Specimens	Decontamination/disinfection	Infection Control
<i>Coxiella burnetii</i>	Q Fever	Inhalation of airborne bacteria Direct contact with fomites Not communicable between persons	ELISA ¹ IFA ²	Acute and convalescent serum	Resistant to heat, drying, and many common disinfectants. Bacteria can survive for long periods in the environment.	
<i>Brucella</i> species	Brucellosis	Contact with infected material. Airborne also Not communicable between persons	Gram: negative Oxidase: positive Urease: positive	Blood or bone marrow Acute and convalescent serum	Standard approved disinfectants	
<i>Burkholderia mallei</i>	Glanders	Direct skin or mucous membrane contact with infected materials. Human-to-human transmission has been reported.	Gram: negative CF ³ titre > 1:20	Gram stain of sputum, urine or skin Acute and convalescent sera	Standard approved disinfectants	Standard precautions
<i>Burkholderia pseudomallei</i>	Melioidosis	Inhalation & ingestion of contaminated soil & water Person-to-person transmission reported via contaminated body fluids	Gram: negative		Standard approved disinfectants	Standard precautions
Ricin toxin	Inhibition of protein synthesis	Contact with mucous membranes or injected Not transmissible from human to human	Time-resolved fluorescence immunoassay ⁴ : PCR ⁵	Serum	Decontaminate with 0.1% or 0.5% bleach.	Wash patient with soap and water
<i>Clostridium perfringens</i> , epsilon toxin	Intoxication	Ingestion of contaminated food Not transmissible from human to human	ELISA	Serum Nasal swabs from persons exposed to respiratory aerosol for at least 12-24 hours	Decontamination, if needed, soap and water or 0.5% hypochlorite for 10-15 minutes Destroy any contaminated food	Standard precautions
<i>Staphylococcus aureus</i> enterotoxin B	Intoxication	Ingestion or inhalation Not transmissible from human to human	ELISA	Serum Nasal swabs from persons exposed to respiratory aerosol for at least 12-24 hours	Decontamination, if needed, soap and water or 0.5% hypochlorite for 10-15 minutes Destroy any contaminated food	Standard precautions

Notes

1. ELISA – Enzyme-linked immunoassay used to detect specific antibodies to the organism
2. IFA – indirect immunofluorescent antibody assay used to detect specific antibodies to the organism
3. Complement fixation test
4. Time resolved fluorescence immunoassay: In this test, the laboratory technicians use an antibody that binds to ricin to enable them to detect it in environmental samples.
- 5.. PCR – polymerase chain reaction. PCR for ricin: looks for the DNA of the gene that produces the ricin protein

Web sites

Coxiella burnetii: <http://www.cdc.gov/ncidod/dvrd/qfever/index.htm>

Brucella species: <http://www.bt.cdc.gov/agent/brucellosis/index.asp>

Glanders: http://bioterrorism.slu.edu/bt/quick/fact_sheet.htm

Melioidosis: http://www.cdc.gov/ncidod/dbmd/diseaseinfo/melioidosis_g.htm
<http://www.emedicine.com/emerg/topic884.htm>

Ricin: http://www.michigan.gov/mdch/0,1607,7-132-2945_21919_23628---,00.html
<http://www.bt.cdc.gov/agent/ricin/erc9009-86-3.asp>

Clostridium perfringens:

Staphylococcal enterotoxin: <http://www.emedicine.com/emerg/topic888.htm>
<http://www.nbc-med.org/SiteContent/MedRef/OnlineRef/FieldManuals/medman/chap3.htm#b>