




Universal/Standard Precautions for Handling

**HUMAN SPECIMENS**

(blood, body fluids, cell lines, tissue<sup>1</sup>)



<b>Hazards</b>	<b>Potential Hazards</b>	<ul style="list-style-type: none"> <li>Bloodborne pathogens (BBP), not limited to Hepatitis B, Hepatitis C, and Human Immunodeficiency Virus (HIV); risk of acute or chronic illness, e.g., chronic Hep C, HIV-AIDS.</li> <li>All cell lines could be tumorigenic (may result in tumor formation) and/or could contain BBP.</li> <li>Routes of exposure: percutaneous (non-intact skin, injections, punctures, lacerations) or mucous membrane (eyes, nose, mouth) contact.</li> </ul>
	<b>Medical Screening</b>	<ul style="list-style-type: none"> <li>Complete the following through Employee Occupational Health and Wellness (EOHW) (919-684-3136), Duke Clinic in the sub-basement of the Orange Zone (Room 0320):             <ul style="list-style-type: none"> <li>EOHW health screening for laboratory worker and offered the Hepatitis B vaccination                 <ul style="list-style-type: none"> <li>If you have prior vaccination records, contact EOHW to confirm requirements are met.</li> </ul> </li> </ul> </li> </ul>
<b>Hazard Controls</b>	<b>Transport</b>	<ul style="list-style-type: none"> <li>Primary container placed in a clean, sealed, leak-proof secondary container labeled with biohazard symbol.</li> </ul>
	<b>Work Practice Controls</b>	<ul style="list-style-type: none"> <li>Maintaining proper workplace signage and labeling is staff's responsibility.</li> <li>Signs must be posted on equipment that contain biohazards and at entrance.</li> <li>Area must be secured when no one is present.</li> <li>For aerosol or droplet-generating procedures, use a Class II biological safety cabinet (BSC). If a BSC is not available, use a combination of other controls (equipment, splash guards) and PPE.</li> <li>Wash hands immediately after removing gloves and before leaving the work area.</li> <li>No mouth pipetting, eating, drinking or applying cosmetics in the work area.</li> <li>Eliminate sharps when possible or at minimum, use safer devices.</li> <li>If centrifuging, refer to <b>Centrifugation Safety (linked here)</b>.</li> </ul> 
	<b>Personal Protective Equipment (PPE)</b>	<ul style="list-style-type: none"> <li>Lab coat (or gown/tyvek, etc.) and gloves required. Mucous membrane protection (e.g. safety glasses/mask or face shield) must be used if there is a potential for splash or spray, or aerosol-generating procedures outside the BSC, such as when opening tube and cleaning up spills.</li> <li>Remove PPE prior to leaving the lab area. Wash hands.</li> </ul>
	<b>Cleaning &amp; Disinfection</b>	<ul style="list-style-type: none"> <li>Refer to label (dilution/contact time) on EPA-registered disinfectant effective against BBP listed above. <b>See EPA-registered Disinfectants (linked here)</b>.</li> </ul>
<b>Other</b>	<b>Waste</b>	<ul style="list-style-type: none"> <li><b>See Duke's Medical Waste Management policy (linked here)</b></li> <li><b>Liquid waste (no incompatible chemicals):</b> Treat with at least 1:10 (bleach:liquid waste) for 30 minutes before being carefully poured down the drain (while wearing full face protection), followed by a copious amount of water to prevent corrosion of the drain pipes.</li> <li><b>Solid disposal items:</b> <ul style="list-style-type: none"> <li><b>If autoclaving:</b> Place in an autoclavable bag that is loosely closed to allow for steam penetration. Place bag in a secondary autoclavable tray/open bin (to prevent or contain leaks) and autoclave for 90 minutes at 121 degrees Celsius, 15 p.s.i. Allow to cool. Place in leak-proof containment and transport to the building dumpster.</li> <li><b>If not autoclaving:</b> Follow guidelines in policy (above) for medical waste pick-up.</li> </ul> </li> <li><b>Sharps:</b> Activate safety device (if available) and place sharps immediately in puncture resistant sharps container (needle box); close when container is two-thirds filled or sooner. DO NOT attempt to jam used needles into a full container. Follow solid disposal guidelines.</li> </ul>
	<b>Spills</b>	<ul style="list-style-type: none"> <li>Wear full PPE, including a lab coat, disposable gloves, and full face protection.</li> <li>Cover spill with paper towel or other absorbent materials.</li> <li>Decontaminate area with <b>freshly-prepared</b> 1:10 dilution of bleach:water (<i>at least 0.5% sodium hypochlorite</i>) or use an approved hospital disinfectant.</li> <li>Pour disinfectant on spill, first around the outer edges and working in. Let sit for 20 minutes.</li> <li>Pick up sharp items <u>with mechanical device</u> and place into biohazard sharps container.</li> <li>Dispose of materials in a plastic leak-proof bag or medical waste container.</li> <li>Repeat disinfection of area following the above steps.</li> <li>Refer to the Emergency Response Guide posted in your work area for more information.</li> </ul>
	<b>Exposures</b>	<ul style="list-style-type: none"> <li>Remove contaminated clothing.</li> <li>Wash skin exposures with soap and water for 1 minute. For eye exposures, flood eyes with water from eyewash station or sink. Obtain medical attention, if necessary.</li> <li>Employees call the EOHW exposure hotline at 919-684-8115 or 115 from a Duke phone.</li> <li>Report incident to supervisor and complete the <b>Report a Work-Related Accident, Injury, or Illness form (linked here)</b>.</li> </ul>
	<b>Training</b>	<ul style="list-style-type: none"> <li>Complete minimum safety training requirements for your job.</li> <li>Complete the online Bloodborne Pathogens Training (or BSL-2/BBP if working in a designated BSL-2 laboratory) at <a href="https://sms.duhs.duke.edu/onlinetraining">https://sms.duhs.duke.edu/onlinetraining</a>.</li> <li>All personnel shall read and fully adhere to the requirements in this document.</li> </ul>
	<b>Questions</b>	Contact OESO - Biological Safety Division at 919-684-8822 or <a href="mailto:biosafety@duke.edu">biosafety@duke.edu</a>

<sup>1</sup>An additional risk assessment is required for known or suspected prion disease tissue. Contact OESO – Biological Safety.

**FOR LAB USE  
AUTHORIZED PERSONNEL ONLY!**



**BIOSAFETY LEVEL**

**2**

**Principal Investigator:**

**Biological Material(s):**

**Bldg:**

**Room:**

Special Instructions/ Requirements Prior to Entry, Working, or Exit (*i.e. personal protective equipment (PPE) worn*):

**REMOVE PPE AND WASH HANDS BEFORE LEAVING THE WORK AREA.**

<b>EMERGENCY CONTACT/ADVICE</b>	<b>CONTACT</b>	<b>WORK PHONE</b>	<b>After hours PHONE</b>
PRIMARY			
SECONDARY			
Departmental Contact (if necessary)			

