

# MICROTOME & CRYOSTAT SAFETY GUIDE



ENVIRONMENT,  
HEALTH & SAFETY  
UNIVERSITY OF MICHIGAN



Left to Right: Freezing (Cryostat), Rotary, Sliding microtomes

<b>Description</b>	Specialized precision cutting instruments used to slice extremely small sections from a block of embedded tissue, also called microsectioning.
<b>Risks</b>	<ul style="list-style-type: none"><li>• Cuts from sharp blades</li><li>• Exposure to extreme temperatures</li><li>• Exposure to potentially infectious materials/biohazards</li><li>• Electrical shock from electrical components</li><li>• Potential generation of aerosols</li><li>• Exposure to chemical fixatives or disinfectants</li></ul>
<b>Safety Precautions</b>	<ul style="list-style-type: none"><li>• All users must be trained</li><li>• Never directly handle blades</li><li>• Guards, blade &amp; wheel locks must be engaged when not in use</li><li>• Use forceps or tongs to remove tissue sections or blades</li><li>• Keep clearance between user's hands and any moving parts/blades</li><li>• Sit at proper height for user</li></ul>
<b>PPE</b>	<ul style="list-style-type: none"><li>• Lab coat</li><li>• Safety glasses</li><li>• Gloves</li><li>• Cut resistant gloves</li><li>• Cryogenic gloves</li></ul>
<b>Operation &amp; Cleaning</b>	<ul style="list-style-type: none"><li>• Before use check to make sure blades or tissues were not left by previous user</li><li>• Before ever reaching inside be sure; roll guard is over blade, and wheel is in "LOCKED" position</li><li>• Use a sectioning brush for sample or chuck</li><li>• Keep hands clear when adjusting the stage</li><li>• Ensure foot pedal is positioned properly to avoid accidental activation</li><li>• Always remove blade before removing sample or before cleaning</li></ul>