

Personal Protective Equipment Guidelines

Chemical			
Hazard	Condition I	Condition II	Recommended PPE
Corrosive	Small Volumes (<1L)	Acid	<ol style="list-style-type: none"> Splash goggles recommended; safety glasses with supervisor consent Lightweight, chemically resistant gloves Lab coat
		Base	<ol style="list-style-type: none"> Splash goggles Lightweight, chemically resistant gloves Lab coat
	Large Volumes (>1L)		<ol style="list-style-type: none"> Splash goggles at a minimum; splash goggles under face shield recommended Lightweight, chemically resistant gloves for incidental exposure Heavy duty, chemically resistant gloves for immersion or prolonged contact Lab coat Rubber apron if splash or spill to large area of body possible

These guidelines offer general recommendations that are **not** intended to cover all situations. Use caution when applying these guidelines. Do not underestimate risk.

Chemical

Hazard	Condition I	Condition II	Recommended PPE
Organics	Small Volumes (<1L)		<ol style="list-style-type: none"> 1. Splash goggles recommended; safety glasses with supervisor consent 2. Lightweight, chemically resistant gloves 3. Lab coat
	Large Volumes (>1L)		<ol style="list-style-type: none"> 1. Splash goggles at a minimum; splash goggles under face shield recommended 2. Lightweight, chemically resistant gloves for incidental exposure 3. Heavy duty, chemically resistant gloves for immersion or prolonged contact 4. Lab coat
	Dispensing (≥5 gal containers)		<ol style="list-style-type: none"> 1. Splash goggles under face shield 2. Heavy duty, chemically resistant gloves 3. Bonding and grounding equipment for flammable or combustible solvents 4. Lab coat 5. Rubber apron if splash or spill to large area of body possible

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Hazard	Condition I	Condition II	Recommended PPE
Peroxide Formers / Explosive / Reactive/ High Energy Oxidizers	Peroxide Formers	Heated	<ol style="list-style-type: none"> 1. Impact resistant splash goggles at a minimum; splash goggles under impact resistant face shield recommended 2. Lightweight, chemically resistant gloves 3. Lab coat 4. Procedure conducted in fume hood behind blast shield
		Not Heated	<ol style="list-style-type: none"> 1. Splash goggles recommended; safety glasses with supervisor consent 2. Lightweight, chemically resistant gloves 3. Lab coat
	Explosives / Reactives/ High Energy Oxidizers		<ol style="list-style-type: none"> 1. Impact resistant splash goggles at a minimum; splash goggles under impact resistant face shield recommended 2. Lightweight, chemically resistant gloves 3. Lab coat 4. Procedure conducted in fume hood behind blast shield
	Closed systems / Heated systems / Systems under Pressure or Vacuum		<ol style="list-style-type: none"> 1. Safety goggles under impact resistant face shield 2. Lightweight, chemically resistant gloves 3. Lab coat 4. Procedure conducted in fume hood behind blast shield

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Hazard	Condition I	Condition II	Recommended PPE
Particularly Hazardous Materials (Carcinogens, Reproductive Toxins, Sensitizers, and Highly Toxic Materials)	Absorbed Through Skin		<ol style="list-style-type: none"> 1. Splash goggles at a minimum; splash goggles under face shield recommended for procedures with risk of splashes or sprays 2. Chemically resistant gloves (Gloves must be resistant to compound in use! Consider use of multiple glove layers such as Silver-Shield or 4H gloves under another form-fitting glove.) 3. Lab coat
	Finely Divided Solids		<ol style="list-style-type: none"> 1. Splash goggles 2. Lightweight, chemically resistant gloves; do not use gloves that generate static electricity (such as latex) when handling dry materials that are electrostatic 3. Lab coat 4. Manipulations conducted in an enclosure, preferably ventilated, until powder sufficiently wetted to inhibit airborne dissemination of powdered material 5. Personnel may use disposable dust masks for manipulations of dried material (see policy on Voluntary Use of Disposable Dust Masks)
	Other		<ol style="list-style-type: none"> 1. Splash goggles recommended; safety glasses with supervisor consent 2. Lightweight, chemically resistant gloves 3. Lab coat

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Radiation (including light radiation)

Ionizing Radiation (Unsealed radioisotopes)

1. Safety glasses at a minimum; safety goggles recommended when isotope in solution with other chemicals
2. Disposable latex or nitrile gloves
3. Lightweight, chemically resistant gloves when isotope in solution with other chemicals
4. Lab coat
5. Lead apron for gamma-emitters and X-rays
6. Beta shield for beta emitters

Non-Ionizing Radiation

UV

1. UV protective eyewear
2. UV protective face and neck shield
3. Disposable latex or nitrile gloves
4. Sunblock for areas of exposed skin

IR

1. IR protective eyewear
2. Clothing to protect exposed skin

Laser

1. Protective eyewear of appropriate optical density
2. Lab coat (flame resistant for Class IV lasers)

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Biological Agents

<p>Human Blood & OPIM</p>		<ol style="list-style-type: none"> 1. Safety glasses or splash goggles as appropriate 2. Fluid barrier masks or face shield if procedure carries risk of splashes or sprays 3. Disposable latex or nitrile gloves 4. Lab coat or gown
<p>Microorganisms, Tissue Culture, Cell Lines, Recombinant DNA</p>	<p>Biosafety Level 1 (BSL 1)</p>	<ol style="list-style-type: none"> 1. Safety glasses or splash goggles as appropriate 2. Disposable latex or nitrile gloves if skin is broken or rash present 3. Lab coat
	<p>Biosafety Level 2 (BSL 2)</p>	<ol style="list-style-type: none"> 1. Safety glasses or splash goggles as appropriate 2. Fluid barrier masks or face shield if risk of splashes or sprays 3. Disposable latex or nitrile gloves 4. Lab coat
	<p>Biosafety Level 3 or 4 (BSL 3 or BSL 4)</p>	<p>Work with BSL 3 and BSL 4 agents is not permitted at this time</p>
<p>Prions, Prion Infected Animals, Prion Infected Tissues</p>		<ol style="list-style-type: none"> 1. Splash goggles 2. Fluid barrier masks or face shield if risk of splashes or sprays 3. Disposable latex or nitrile gloves 4. Cut resistant gloves underneath disposable latex or nitrile gloves when using sharps other than needles (e.g., blades, scalpels, etc.) 5. Wrap-around or solid-front gowns

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Other Hazards

Glassware under Pressure of Vacuum (including heated systems)		<ol style="list-style-type: none"> 1. Impact resistant safety glasses at a minimum; safety goggles may be indicated depending on substance in vessel 2. Padded or otherwise cut resistant gloves for transport and/or manipulations
Compressed Gases		Steel toed shoes recommended when moving compressed gas cylinders
Temperature Extremes	Cryogenics	<ol style="list-style-type: none"> 1. Thermal gloves 2. Safety glasses 3. Face shield when removing vials from liquid nitrogen (vials may implode upon rapid warming) 4. Lab coat
	(-)70°C Freezer	<ol style="list-style-type: none"> 1. Thermal gloves 2. Lab coat
	Autoclave	<ol style="list-style-type: none"> 1. Thermal gloves 2. Rubber apron
Sharps (blades, scalpels, etc.)		Cut resistant gloves when handling very sharp blades (such as when cleaning or replacing microtome blades)
Loud Equipment, Noise, or Alarms		Hearing protection depending on sound level (dB) - contact Employee Safety and Health for evaluation
Soldering		<ol style="list-style-type: none"> 1. Safety glasses 2. Lab coat 3. Disposable dust masks may be used (see policy on Voluntary Use of Disposable Dust Masks)
Other		<ol style="list-style-type: none"> 1. Safety glasses at a minimum; safety goggles recommended 2. Lightweight, chemically resistant gloves 3. Lab coat

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