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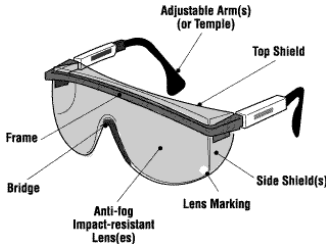





This document is to be used as a guide for selecting appropriate PPE in the Laboratory. PPE application should be based on risk assessment, which includes evaluation of the hazard and the procedure used, Safety Data Sheets, and in consultation with the Principal Investigator and/or Laboratory Supervisor/Manager.

Applicable PPE	Specific Type (example)	Characteristics	Applications
Light Latex, Vinyl, Nitrile Gloves	Disposable Latex Gloves 	Non-Powdered <i>*Powdered latex gloves are not permitted for use on campus.</i>	Working with biological hazards (known or potentially known infectious materials including work with animals)
	Disposable Nitrile Gloves 	Puncture resistant, protection from splash hazards	Working with biological hazards and chemical splash hazards
	Disposable Vinyl Gloves 	Economical, durable, similar to latex	Working with biological hazards
Light chemical resistant gloves	Natural rubber latex 	Chemical resistant, liquid-proof	Working with small volumes of corrosive liquids, organic solvents, flammable organic compounds
Light to heavy chemical resistant gloves	Nitrile Gloves 	Chemical resistant, good puncture, cut, and abrasion resistance	Apparatus under pressure, air or water reactive chemicals
Heavy chemical resistant gloves	Butyl Gloves 	High permeation resistance to most chemicals	Large volumes of organic solvents, small to large volumes of dangerous solvents, acutely toxic or hazardous materials
	Viton Gloves 	High permeation resistance to most chemicals	Same as butyl gloves, plus hazardous material spills






Applicable PPE	Specific Type (example)	Characteristics	Applications
Heavy chemical resistant gloves (continued)	Butyl/Silver Shield Gloves and Apron 	Extra chemical and mechanical protection	Same as butyl and Viton II gloves, added mechanical protection, hazardous material spills
Insulated Gloves	Terrycloth Gloves 	Heat resistant	Working with hot liquids and equipment, open flames, water bath, oil bath, autoclaves
	Cryogen Gloves 	Water resistant or water proof, protection against ultra-cold temperatures	Cryogenic liquids handling
Wire Mesh Gloves	Steel Mesh 	Cut resistant	Working with live animals
Chemical Resistant Apron	Rubber-coated Wash Apron 	Chemical splash protection, good abrasion resistance	Working with apparatus under pressure, air or water reactive chemicals, large volumes of corrosive liquids
	Neoprene Apron/Sleeves 	Chemical resistant, tear resistant; splash protection	Water or air reactive chemicals, large volumes of corrosive liquids, small to large volumes of acutely toxic corrosives

Additional information on chemical resistance glove selection can be found online at: [Micro Flex Chemical Resistance Glove Guide](#)

Applicable PPE	Specific Type (example)	Characteristics	Applications
<p>Lab Coats</p>	<p>Knee Length Lab Coat</p> 	<p>Protects skin and clothing from dirt, inks, non-hazardous chemicals, biohazards without aerosol exposure</p>	<p>General use; Chemical, Biological, Radiation, and Physical Hazards</p>
	<p>Flame Resistant Lab Coat</p> 	<p>Flame resistant (e.g. Nomex or flame-resistant cotton)</p>	<p>Working with water or air reactive chemicals, large volumes of organic solvents, potentially explosive chemicals</p>
<p>Gowns</p>	<p>Disposable Gowns</p> 	<p>Clothing and skin protection</p>	<p>Working with biohazards</p>
	<p>Tyvek Gowns</p> 	<p>High tear resistance, protection from particulates</p>	<p>Working with biohazards with potential for exposure to airborne transmissible disease</p>
<p>Cap</p>	<p>Bouffant Caps</p> 	<p>Economical protection for hygienic work environments; protection from dirt, dust</p>	<p>Working with biohazards, especially in animal facilities</p>
<p>Shoe Cover</p>	<p>Disposable Shoe Covers</p> 	<p>Protection from dirt, dust; maintenance of hygienic work environments. Adjustable fit, non-skid soles</p>	<p>Working with biohazards, especially in animal facilities</p>

Applicable PPE	Specific Type (example)	Characteristics	Applications
Safety Glasses		Polycarbonate lens, side shields for eye protection; meets ANSI and OSHA specifications	Working with chemical, biological, radiation, physical hazard ; laboratory work
Goggles	Chemical Goggles 	Tight fitting, protects eyes from impact, spray, paint, chemicals, flying chips, dust particles; polycarbonate lens, indirect ventilation, meets ANSI and OSHA specifications	Working with large volumes of corrosive liquids, small to large volumes of acutely toxic corrosives; working with large volumes of organic solvents, acutely toxic or hazardous chemicals, apparatus under pressure, air or water reactive chemicals
	Laser/ UV Goggles 	Appropriately shaded goggles; optical density based on beam parameters	Working with UV light sources, Class 3 or Class 4 lasers
Face Shield		Chemical resistant face shield	For use with mild acids, caustics, aromatic hydrocarbons, methylene chloride; splash hazard; air or water reactive or potentially explosive chemicals
Safety Shield		Acrylic, weighted shield, three sided, benchtop shield, frosted edges	Protects from chemical splash, beta radiation, exposure to bloodborne pathogens
UV Face Shield		UV resistant, appropriately shaded face shield	Working with transilluminators, crosslinkers, biosafety cabinets, lasers, and another other equipment that emits UV radiation.

Eye and face protection must meet ANSI Z87.1 - American National Standard Practice of Occupational and Education Eye and Face Protection.

Applicable PPE	Specific Type (example)	Characteristics	Applications
<p>Respirators **Requires Annual Fit Test for Use</p>	<p>Surgical Masks</p> 	<p>Used for bacterial filtration</p>	<p>Working with live animals; working with infectious material with potential aerosol exposure</p>
	<p>N-95**</p> 	<p>Protects against dusts, fumes, mists, microorganisms</p>	<p>Working with live animals or infectious materials with known airborne transmissible disease; dusty environments</p>
	<p>Half Face**</p> 	<p>Air purifying respirator protects against variety of particulates, vapors, dust, mists, fumes; depends on filter cartridge used</p>	<p>Working with live animals or infectious materials with known airborne transmissible disease; dusty environments; chemical vapors; particulates</p>
	<p>Full Face**</p> 	<p>Same as half- face, but with greater protection factor, and greater protection of eyes and face; depends on filter cartridge used</p>	<p>Working with live animals or infectious materials with known airborne transmissible disease; dusty environments; chemical vapors; particulates</p>
	<p>PAPR</p> 	<p>Air supplying respirator; delivers steady supply of filtered air with loose fitting hoods</p>	<p>Working in BSL – 3 environments; working in dusty environments; chemical vapors, particulates; used when full- face or half –face respirator doesn't fit individual</p>

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Please call 402.559.6356 or email unmcehs@unmc.edu with any questions.