








	Hazard	Disposable/ Reusable	Glove Type	Photo	Additional Information
Biological	Biological research & Bloodborne pathogens.	Disposable	Nitrile, or vinyl gloves		Both Nitrile and Vinyl gloves offer an effective barrier to infectious agents and are required for working with human or primate blood, body fluids, unfixed tissue, & cell lines. <u>Doubled</u> Vinyl & Nitrile gloves required for working with live animals at Animal Biosafety Level 2 & 3, or non-human primates. Note: If research requires the use of chemicals one must choose the chemical appropriate glove material. Please see "Chemical" section of the glove guide.
	Minor/incidental chemical contamination	Disposable	Nitrile		Low level e.g. includes small drips on the side of beaker or test tube. This excludes toxic chemicals that readily penetrate the skin, ie Benzene.
Chemical	Gross Chemical contamination or high hazard	Disposable	See Page 2	Various	Gross Chemical contamination or high hazard e.g. pouring acid, work involving immersion of hands in chemical and work with toxic chemicals that readily penetrate the skin.
	Radioactive materials in the laboratory.	Disposable	Nitrile (in general)		Please note: Chemical resistant gloves shall be selected based on applicable chemical hazard associated with the radioactive material(s).
Physical	Lasers	Reusable or Disposable	UV protective gloves		Black neoprene gloves are a good example.
	Cryogens or Dry Ice	Reusable	Cryogenic gloves		Cryogenic gloves are insulated to prevent burns from extreme cold temperatures when handling cryogens. They have different properties from gloves designed for hot temperatures. Please select gloves specifically designed for cryogen handling. Cryogen gloves with mid-arm or longer protection is recommended for transferring cryogenic liquids.
	Hot surfaces, e.g. items from autoclaves, welding operations.	Reusable	Heat resistant gloves		Gloves can prevent burns. Autoclave gloves are made of absorbent fabric and should never be used to handle cryogens.
	Handling knives or sharp objects such as box cutters.	Reusable	Sturdy work gloves or metal mesh gloves		The best glove will depend on the circumstances for which cutting tools are being used.

*A Note on Latex Gloves & Allergies - Approximately 8% of health care workers have been sensitized to latex rubber proteins or the chemicals used in manufacturing of the gloves. EH&S can provide information on substitutes for latex gloves that provide the same level of barrier protection as latex without putting the wearer at risk for sensitization. Always use non-powdered gloves regardless of the glove material used. Latex proteins adsorbed onto airborne powder increase the risk of sensitization and can exacerbate pre-existing allergic symptoms.

Chemicals Commonly Used in Research

This is a short list of commonly used chemicals in laboratory research and their recommended protective gloves. For chemicals not on this short list, please refer to the glove manufacturer's glove selection guide or Columbia University Environmental Health & Safety @ labsafety@columbia.edu for additional information or assistance in selecting the appropriate gloves.

Chemical	Glove Recommendation
Acetic Acid (Glacial)	Neoprene
Acetone	Neoprene
Acetonitrile	Laminate (Nitrile, Neoprene gloves are suitable for that application under careful control of its use as per the manufacture)
Benzene	PVA (POLYVINYL ALCOHOL)
Chloroform	PVA (POLYVINYL ALCOHOL)
Ether	Nitrile
Ethidium Bromide	Nitrile, Neoprene
Ethyl/Methyl Alcohol	Nitrile
Formaldehyde	Nitrile
Hexane	Nitrile, Neoprene
Hydrochloric Acid	Nitrile, Neoprene
Hydrofluoric Acid	Nitrile, Neoprene
Lactic Acid	Nitrile
Mercury	Nitrile
Methyl Methacrylate	Laminate, PVA (POLYVINYL ALCOHOL)
Methylene Chloride	PVA (POLYVINYL ALCOHOL)
Nitric Acid	Nitrile (10% solutions), Neoprene (70% solutions)
Phenol	PVC (POLYVINYL CHLORIDE), Neoprene
Phosphoric Acid	Nitrile, Neoprene
Perchloric Acid	Nitrile, Neoprene
Sulfuric acid	Laminate (Nitrile, Neoprene gloves are suitable for that application under careful control of its use as per the manufacture)
Toluene	PVA (POLYVINYL ALCOHOL)
Xylene	Laminate, Nitrile, PVA (POLYVINYL ALCOHOL)

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