Corrosives

Corrosives are materials that cause the destruction of exposed tissues and mucous membranes. They can be encountered as solids, pure liquids, solutions, or gases. Strong corrosive solutions typically have a pH <2.5 (acids) or >11 (bases), and include inorganic or organic substances dissolved in water. Corrosives cause damage either through the presence of hydronium (H_3O^+) or hydroxide (OH^-) ions in solution, reaction with skin and eye moisture to generate these same ions, or by damaging cell membranes through lipophilic action (e.g. certain detergents). All corrosives can cause serious eye damage or skin burns in the event of an exposure.

Chemicals covered by this SOP **do not** include corrosives with additional hazardous properties (e.g. nitric acid, perchloric acid, or corrosive flammables).

Personal Protective Equipment & Personnel Monitoring

Lab Coat

Traditional white lab coat and chemical-resistant apron when working with large volumes.

Gloves

Nitrile or neoprene gloves. Consult glove selection chart for heavy handling of corrosives.

Do not wear latex gloves.

Eye Protection

Face Shield

ANSI Z87.1-compliant safety glasses or safety goggles, or face shield if a splash hazard is present.

Labeling & Storage

Store upright & tightly closed in a dry and well-ventilated place. Keep away from incompatible materials (e.g. segregate acids and bases). Consult the safety data sheet for additional storage compatibility information. Always store liquid acids and bases in chemically-resistant secondary containers (e.g. polypropylene trays or tubs). Containers holding corrosives must be stored below eye level.

Engineering Controls, Equipment & Materials

Fume Hood	Use a fume hood to keep exposure to corrosives as low as possible. If the use of a fume hood is impossible or impractical, please contact the Office of Research Safety (ORS) to determine whether additional respiratory protection is required.

Housekeeping

Spills	Keep acid and/or base neutralizer (e.g. sodium bicarbonate and/or citric acid) in your spill kit. Notify others in the area of the spill, including your supervisor. Refer to the Safety Data Sheet for proper spill procedures if the volume is small (<100 mL) and there is no inhalation hazard.

	For **large spills**[1], notify others in the area of the spill, including your supervisor. Evacuate the location where the spill occurred and call 911. Any exposure must be reported to ORS at 706-542-5288. Remain onsite at a safe distance to answer questions from first responders.
Decontamination	Absorb any corrosive chemicals with absorbent material from the lab's spill and dispose of contaminated absorbent material as hazardous waste.
Waste	Any waste from this chemical class should be disposed of through the UGA Hazardous Waste Program. For assistance with arranging a waste pickup, you may contact the Environmental Safety Division (ESD) at 706-542-5801. Prior to pickup, any container used to hold hazardous waste should be labeled with the following: - "Hazardous Waste" - chemical contents - one or more of the following waste characteristics recognized by EPA: Ignitable, Corrosive, Reactive, or Toxic In addition, any liquid hazardous waste must be stored in secondary containment trays until picked up by ESD.

First Aid & Emergencies

Skin or Eye Contact	Remove contaminated clothing and accessories; flush affected area with water. If symptoms persist, get medical attention.
Inhalation	Move person into fresh air. If symptoms persist, get medical attention.
Ingestion	Rinse mouth with water. If symptoms persist, get medical attention.

[1] A large spill is defined as either a spill of greater than 1 gallon (4L) or a spill of any size that laboratory personnel do not feel comfortable cleaning up themselves.