

# INORGANIC ACIDS (NOT INCLUDING: OXIDIZERS OR COMBUSTIBLES)

## Hazard Description

An inorganic acid is a compound of hydrogen and one or more other element (with the exception of carbon) that dissociates or breaks down to produce hydrogen ions when dissolved in water or other solvents. Often the “stronger” acids.

When handling corrosive chemicals, the eyes and skin are most commonly at risk, however failure to use proper protective equipment and handling procedures can result in exposures to the respiratory and digestive tract through inhalation and ingestion as well.



## Examples

- Hydrochloric acid
- Boric acid
- Hydrofluoric acid (requires additional SOP prior to use)

## Storage

- May be stored with oxidizing acids or organic acids (non-flammable) when in their own secondary containment.
- Acids should not be stored near cyanide or sulfide containing chemicals to prevent formation of hydrogen cyanide or hydrogen sulfide gas.
- Acids should not be stored near metal piping that supplies natural gas or water.

## Hazardous Waste

- Must be disposed of as per the [University's Hazardous Waste Standard](#).
- Be aware of what acids can be mixed. Piranha solutions (sulfuric acid/peroxide mix) as well as aqua regia (nitric acid/hydrochloric acid mix) are highly aggressive, off-gassing solutions. They require an SOP to be developed prior to use. The SOP must include neutralization. If there are other contaminants remaining (e.g., heavy metals) then the neutralized solution needs to be brought to the waste facility.
- Inorganic acids should not be mixed prior to be sent to the waste facility. Individually segregate.
- Should use plastic bottles for waste in case of off-gassing which will be visible by expansion of container (if off-gassing is too rapid for venting cap to allow release).