

Fact Sheet



Lecture Bottle Safety

Lecture bottles contain pressurized gases that pose hazards with the chemical composition of the gases, stored energy of compression, and possibility of release. Lecture bottles present a potential hazard even for inert gases. Failure of the cylinder or valve can create dangerous chemical releases and projectiles at high velocity. Please follow the guidelines below for the proper use and storage of lecture bottles.

Lecture Bottle Use

Bottle Integrity

Inspect the bottle and regulator prior to use

- Never use lecture bottles or regulators that are damaged or corroded.



Regulators and Location

Only use **regulators** and tubing that are appropriate for the gas.



Bottles must be **secured during use** and bottles containing hazardous gases must be used in a fume hood or gas cabinet.

Acid Gas Cylinder Info

- Inhalation and dermal hazard
- Corrosive
- Short shelf life
- Degrades metal cylinders and valves
- Should not be stored for long periods of time
- May be acutely toxic

Acid Gas Examples

- Hydrogen fluoride
- Hydrogen chloride
- Hydrogen bromide
- Hydrogen iodide
- Phosgene (carbonyl chloride)
- Phosphorus pentafluoride
- Sulfur dioxide

Lecture Bottle Storage

Position, Labeling, and Segregation

Lecture bottles must be stored in an **upright position**.

- Lecture bottles stored on their side are more susceptible to damage, corrosion and leaks.



- Lecture bottles must be properly **labeled**.

Segregate incompatible gases, such as flammable and oxidizing gases. Store poisonous gases in fume hood or ventilated gas cabinet.

Examples of improper bottle storage



Emergency Procedures

- Evacuate the laboratory if a hazardous lecture bottle is leaking and not in a fume hood or gas cabinet
- Contact EH&S immediately if there is a leak involving a hazardous lecture bottle.
 - EH&S 951-827-5528 (day)
 - UCPD 951-827-5222 (after hours)

Disposal

To request a pick-up of a lecture bottle(s), please visit:

- www.ehs.ucr.edu/waste
- or call EH&S 951-827-5528