

# LASER SAFETY

The purpose of the University's Laser Safety Program is to assure that all activities related to the use, operation or ownership of lasers and laser systems are conducted with the proper precautions and are in compliance with applicable governmental regulations. These regulations include **FAC Chapter 10D-89, 21 CFR§1040**, and **ANSI Z136.1-3**.

Lasers are categorized into four different safety classifications (Classes 1-4) depending upon power output, wavelength, and accessibility to the beam by the operator. The Laser Safety Program regulates the use of Class 3 and 4 lasers. This program includes requirements on the purchase, acquisition, transfer, movement and registration of lasers. The program also includes training, medical surveillance, and certification of operators.

**The Principal Investigator is responsible for ensuring compliance with the Laser Safety Program and for coordinating all laser activities with the Laser Safety Officer (LSO).** Contact **EHS** for additional information including issues concerning personal protective equipment (required protective eyewear), standard operating procedures, and training schedules.

# COMPRESSED GAS CYLINDERS

Compressed gas cylinders may present both physical and health hazards. Gases may be oxidizers, flammable, reactive, corrosive, or toxic and these properties must be considered when developing experimental procedures and designing apparatus. In addition, compressed gases, when handled incorrectly, can be very dangerous with a high potential for explosion.

Although each DOT approved gas cylinder is designed, constructed, and tested to safely contain its contents, additional procedures should be followed in handling and storing compressed gas cylinders:

- ! Cylinders must be clearly labeled with their contents.
- ! Regulators must be compatible with the cylinder contents and valve.
- ! Cylinders must be properly secured at all times.
- ! Cylinders must be stored in a cool, well-ventilated area away from sources of ignition, electricity, and heat.
- ! Empty or unused gas cylinders must always be capped.
- ! Cylinder carts must be used to transport capped cylinders.
- ! Cylinders containing flammable gases must not be stored near oxidizers.
- ! Cylinders must not be stored near corrosives.
- ! Cylinders must be stored away from doors and exits.

The Receiving Department of each campus will handle the delivery and collection of gas cylinders. All cylinders (new, used, or empty) must be secured at all times. Chains, belts, or clamps should be used to secure cylinders to the walls

or benches in the laboratory. Do not store gas cylinders in the hallway.

The use of disposable or lecture size cylinders is strongly discouraged. If special circumstances warrant the use of these types of cylinders, the Principal Investigator is responsible for the additional costs of disposal.

Although cryogenic liquified gases (e.g. liquid nitrogen) are generally not stored under pressure, laboratory personnel must become familiar with the special hazards associated with the use of these gases. Contact **EHS** for additional information.