Brown University Fire Safety Office Fire Safety in Laboratories

FIRE PREVENTION IN LABORATORIES

The responsibility for fire safety in laboratories and research buildings is shared between all the occupants of the building. Laboratory workers are encouraged to observe the following guidelines:

- Use open flames with extreme caution.
- Do not use "open element" electrical equipment (toasters, hot plates, non-approved space heaters, etc). The glowing element presents a source of ignition for flammable vapors.
- Observe the "No Smoking" rule in all research buildings.
- Processes that generate heat or require the application of heat should not be left unattended.
- Always store flammable materials in appropriate containers.
- Limit the use of extension cords. If additional permanent electrical power is required, arrange to have upgraded service installed by Facilities Management.
- Keep corridors and stairwells clear of furniture, storage, trash and other obstructions (including bicycles). These are your lifelines to safety in an emergency.
- Fire doors in hallways are designed to prevent the spread of smoke and fire through a building. Never block fire doors open.

Familiarize yourself with the location of exits and fire safety equipment:

- Know the location of two exits from the building (not including elevators).
- Know the location of fire alarm pull stations in the vicinity of your lab.
- Know the location of fire extinguishers in and near your lab.

PROCEDURES TO FOLLOW WHEN A FIRE IS DISCOVERED

Any person who discovers a fire or detects an odor of smoke in a building should take the following actions, in the order listed:

- 1. Report the fire by activating the nearest fire alarm pull station
- This will trigger alarm horns throughout the building, and will summon the fire department.
- Pull stations are located at every exit in the building
- Notify people in the area to evacuate immediately.



2. Secure the area as you evacuate

- On your way out of the area, take actions to help limit the spread of the fire, including shutting off oxygen and gas lines, powering-down electrical equipment, and shutting doors and windows behind you if it is safe to do so.
- DO NOT USE THE ELEVATORS
- Stay Calm.

3. Call the Brown Department of Public Safety at 863-4111

- Identify yourself
- Provide the <u>exact</u> location of the incident including the building name, floor, room number, and any pertinent details.
- 4. Make yourself available to emergency responders and direct them to the location of the incident
- 5. Once you leave the building, <u>STAY OUT</u> until fire officials allow you back in.

B. FIRE EXTINGUISHERS

If you discover a fire in its earliest (incipient) stage, you may choose to attempt to fight the fire using a fire extinguisher. You are never under any obligation to attempt to extinguish a fire. Your primary responsibility is to exit the building safely.

You may choose to use a fire extinguisher **ONLY** under all of the following conditions:

- A person has been sent to activate the fire alarm system, and to call Public Safety.
- The fire is in its earliest stage, and smoke and flame pose no immediate threat to you.
- You feel that you can control the fire in 15 seconds or less.

1. Types of Extinguishers

You must select an appropriate extinguisher for the type of fire you hope to extinguish. There are three basic classifications for Fire Extinguishers:

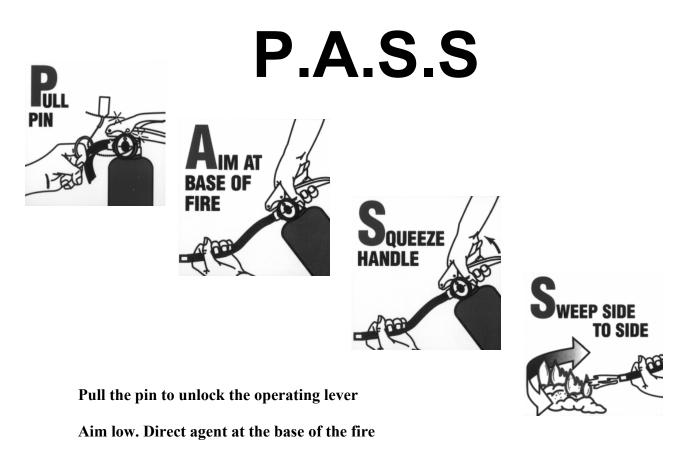
TYPE A ORDINARY COMBUSTIBLES Wood, clothes, paper, rubber, many plastics and other common materials that burn easily.	
B TYPE B FLAMMABLE LIQUIDS Gasoline and other flammable liquids, oil, grease, tar, oil based paint, lacquer and flammable gas.	
TYPE C ELECTRICAL EQUIPMENT Energized electrical equipment, including wiring, fuse boxes, circuit breakers, machinery and appliances.	

- Using an inappropriate fire extinguisher may cause physical injury to the user, and can actually intensify the fire, so be sure to check the label on the front of the extinguisher to match it with the type of fire you are fighting.
- Most of the fire extinguishers you will find on campus are "Multipurpose" or "ABC" type extinguishers. These units are designed to be safe and effective in fighting any of the three most common types of fires: Ordinary Combustibles, Flammable Liquids, and electrical fires.
- Extinguishers are located near the door of most labs, and in the hallways, or near the exits of most University buildings.

2. Using a Fire Extinguisher

If you choose to fight the fire, follow these steps:

- Don't let the fire block your way out. Keep your back to an unobstructed exit
- Stand six to eight feet from the fire
- Remember the "PASS" procedures



Squeeze the handle to discharge the agent. Hold onto the hose... there may be some reaction from the pressure of the escaping agent.

Sweep from side to side and from front to back.

Never assume the fire has been extinguished. Watch for re-ignition and wait for the fire department to respond.