

Bunsen Burner Guidelines

In order to maintain a safe environment and to prevent a fire at Wentworth Institute of Technology (Wentworth), members of the Wentworth community, who are working with Bunsen burners, must adhere to the following guidelines. In case of a fire, as you are evacuating the space, pull the nearest fire alarm, close the doors leading into the space, then call 911 and the Wentworth Police Department at 617-989-4444.

NOTE: Ethyl alcohol/alcohol burners are not permitted at Wentworth.

Recommended Products

- Rated tubing/hose that fits the gas valve outlet and burner inlet. Rated tubing includes fabric-reinforced PVC, fabric-reinforced neoprene (polychloroprene), fabric-reinforced nitrile rubber (NBR), thick-wall non-reinforced neoprene, or tubing specifically designed for Bunsen use.
- Bunsen burner with “No-Tip” safety base and flame stabilizer.

Prior to Use

- Evaluate whether an alternative methods may be used instead of Bunsen Burner.
- Only use a Bunsen Burner for test tubes.
- Don appropriate personal protective equipment.
 - Appropriate eye protection – splash goggles or safety glasses.
 - Flame-resistant or Nomex lab coat must be used.
 - Use insulating heat-resistant gloves when handling hot items.
- NEVER use open flames as a heat source for chemical experiments, distillation, or boiling. Use electric hotplates and heating mantles instead.
- Obtain fire extinguisher training and know the location of the nearest fire extinguisher.
- Read and follow manufacturer’s instructions on how to use the Bunsen burner.
- Remove combustibles (e.g., paper, notebooks), chemicals, and waste from the area.
- Tie back long hair, remove dangling jewelry, and secure loose clothing with tape or other means.
- Inspect the hose for cracks, holes, pinch points, or other defects; replace or trim, if found.
- Secure tubing ends with a hose clamp. Clamp securely but do not over-tighten to avoid splitting the hose.
- Ensure the hose is long enough that it sits comfortably on the bench top without strain on the connections.
- Connect the Bunsen burner to a plumbed natural gas turret and not to a flammable gas cylinder or canister.

- Ensure the hose is securely attached to the gas fitting and the burner.
- Do not position the burner under shelving, cabinets, or overhanging equipment.

During Use

- Use a sparker/lighter with extended nozzle to ignite the burner. Never use a match.
- **Never reach over an exposed flame.**
- Adjust flame to regulate air flow and to produce an appropriate flame for the experiment.
- Do not leave open flames unattended. Never leave the laboratory while Bunsen burner is in use.
- Use tongs when holding objects in a flame and place hot objects on trivets or hot pads.
- Never heat a closed container over a laboratory burner.
- Never look into a test tube or container being heated. Never point the open end of a test tube being heated towards anyone.
- Always use a laboratory burner in a fume hood if toxic chemical fumes are produced during the heating process.
- If you smell a "sulfur" odor, shut off the gas valve.

After Use

- Turn off Bunsen burner.
- Shut off gas to the Bunsen burner. Ensure that the main gas valve is off before leaving the lab.
- Do not touch the Bunsen burner until it has reached ambient temperature.