



Owner C.H.O	DOC. NO. SOP	REV. 2	DATE 12/9/12
DOC. TITLE SOP FOR LABORATORY BURNERS			

AMHERST COLLEGE

Laboratory Burners

Overview

Laboratory burners of all types present fire and safety hazards. They may contain a flammable liquid, produce an open flame and/or burn at a high temperature.

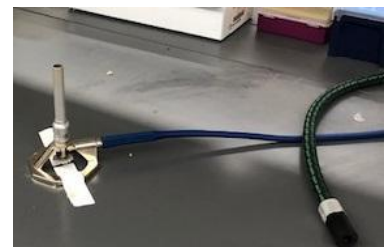
The following are the Best Management Practices for Lab Burners (Alcohol, Bunsen, Meker)

- Use burners as authorized by the faculty member responsible
- Do not use burners or gas without departmental approval
- Use procedures for use consistent with departmental guidelines
- Know the location of all emergency equipment in the laboratory.
- Hair should be tied back, and sleeves should be kept clear of burner
 - Do not reach over flame.
- Wear chemical safety goggles whenever chemicals or heat is used.
- Remove all flammable liquids and combustible materials from area
- Use strikers to ignite flame, not lighters
- Use tongs when holding objects in a flame.
- Test tubes and open containers should be directed away from user
- Hot metal and glass retain heat. Allow items to sufficiently cool
- Turn burner off when not in use.
- In case of emergency involving gas, PUSH “red” gas shut-off by door



Bunsen Burner Procedure

1. **Clear** - Remove combustible, flammable, and oxidizing materials at least 18” away from burner.
 - Burners should have 2’ of overhead clearance
2. **Check** manufacturer-approved tubing for cracks and other damage
3. **Connect** approved tubing to burner gas inlet and gas valve.
4. **Secure** burner to flat non-combustible surface to prevent tipping
5. **Close** or partially close air vents on burner to make it easier to light.
6. **Locate** the striker (flint lighter) and have it ready.
7. **Turn** on the gas.
8. **Light** burner with the striker. Generate spark a few inches above burner and slightly off center.
9. **Adjust** gas to get a low flame and air supply by turning metal collar to get a tight, blue, cone-shaped flame.
10. **Never** leave a lit burner unattended
11. **Turn** off gas when finished using the burner.



Alcohol Burner Procedure



Environmental Health & Safety

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1. **Clear** - Remove combustible, flammable, and oxidizing materials at least 18" away from burner.
 - o Burners should have 2' of overhead clearance
2. **Inspect** glass lamp for cracks, chips or defects
3. **Fill** reservoir of alcohol burner with denatured or ethyl alcohol, using alcohol content of 90% or higher as needed. Fill reservoir in exhaust hood or similar to capture fumes and contain spills.
4. **Remove** the metal cap to expose the wick
5. **Adjust** wick to about 3/8" from the top of the metal cap
6. **Light** the wick using a long reach lighter.
7. **Ignite** lighter first, then approach wick from below to light.
8. **Never** leave a lit alcohol burner unattended.
9. **Extinguish** flame by using the snuffer cap.