



Bunsen Burners

Description

This standard operating procedure outlines the handling and use of Bunsen burners. Review this document and supply the information required in order to make it specific to your laboratory. In accordance with this document, laboratories should use appropriate controls and personal protective equipment when using Bunsen burners.

Bunsen burners produce a single open flame by burning a continuous stream of flammable gas used for heating, sterilization, and combustion.

Potential Hazards

Bunsen burners present burn and fire hazards due to the high-temperature open flame that is produced.

Engineering Controls

Biological safety cabinets (BSCs) and disposable sterile items obviate the need for open flames when aseptic conditions are needed. If an open flame absolutely must be used in a BSC, recommended alternatives such as electrical incinerators or touch-plate microburners are available.

Work Practice Controls

Bunsen burner safety – best practice:

- **PLACE** the Bunsen burner away from any overhead shelving, equipment, or light fixtures.
- **REMOVE** all papers, notebooks, combustible materials and excess chemicals from the area.
- **TIE-BACK** any long hair, dangling jewelry, or loose clothing.
- **INSPECT** hose for cracks, holes, pinched points, or any other defect and ensure that the hose fits securely on the gas valve and the Bunsen burner.
- **REPLACE** all hoses found to have a defect before using.
- **NOTIFY** others in the laboratory that burner will be in use.
- **UTILIZE** a sparker/lighter with extended nozzle to ignite the Bunsen burner. Never use a match to ignite burner.
- **HAVE** the sparker/lighter available before turning on gas.
- **ADJUST** the flame by turning the collar to regulate air flow and produce an appropriate flame for the experiment (typically a medium blue flame).
- **DO NOT** leave open flames unattended and never leave laboratory while burner is on.
- **SHUT-OFF** gas when its use is complete.
- **ALLOW** the burner to cool before handling.
- **ENSURE** that the main gas valve is off before leaving the laboratory.

Additional Precautions:

- Do not use a Bunsen burner in biological safety cabinet.
- For small fires, attempt to extinguish fire if you been trained in fire extinguisher use.
- In case of a large fire activate the fire alarm, evacuate the building and alert authorities.

Personal Protective Equipment (PPE)

Wear standard laboratory attire including safety glasses and avoid wearing synthetic clothing.

Exposures/Unintended Contact



If the employee is in need of emergency medical attention, call 911 immediately.



Contact EHS for advice on symptoms of chemical exposure, or assistance in performing an exposure assessment.

Report all work related accidents, injuries, illnesses or exposures to UM-Flint DPS. Additionally, employees and supervisors must be sure to report the injury to EHS and complete and submit the [Illness and Injury Report Form](#) to WorkConnections within 24 hours. Follow the directions on the WorkConnections website [Forms Instructions](#) to obtain proper medical treatment and follow-up.

If you were involved in or observed an incident or near miss, please complete the [EHS Laboratory Incident and Near-Miss Report Form](#). This will be valuable in improving laboratory safety on UM-Flint campus.

TREATMENT FACILITIES:

<u>MAJOR INJURIES</u>	<u>MINOR INJURIES –During Business Hours</u>	<u>MINOR INJURIES –After Business Hours</u>
Genesys Hospital One Genesys Parkway Grand Blanc, MI 48439 (810) 606-5710 Hurley Medical Center One Hurley Plaza Flint, MI 48503 (810) 262-9000 McLaren Hospital Flint 401 South Ballenger Hwy Flint, MI 48532 (810) 342-2000	Genesys Occupational Health Network 1460 Center Rd. Burton, MI 48509 (810) 715-4620 Mon. to Fri. 7:30 am to 10 pm Sat. & Sun. Noon to 8 pm McLaren Flint-Burton OCC Center 1459 S. Center Rd. Burton, MI 48509 (810) 496-0900 Mon. - Fri. 8 am to 8 pm Sat & Sun 10 am to 2 pm	Downtown Flint 420 S. Saginaw St. Flint, MI 48502 (810) 762-1550 Genesys East 1096 S. Belsay Rd, Suite F Burton, MI 48509 (810) 743-3351 Genesys North 4154 W. Vienna Rd Clio, MI 48420 (810) 686-7397 Genesys South 8447 N. Holly Rd Grand Blanc, MI 48439 (810) 603-0856 Mon. - Fri. 6 to 10pm / Sat. & Sun. 1-10pm

Click [here](#) for more information on the UM – Flint Emergency Preparedness and Response Plan.

Release/Leak Procedure

- When a gas leak occurs, ***personal safety should always come first.***
- Alert and clear everyone in the immediate area where the gas leak occurred.
- Open outside windows, if possible & safe to do so.
- Avoid breathing gas.
- Contact EHS at (810) 766-6763 for release assistance.

Report all emergencies, suspicious activity, injuries, spills, and fires to the UM-Flint Department of Public Safety (DPS) at 911 from any university telephone or (810) 762-3333 from cell phone or non-university telephone. Register with the [University of Michigan-Flint Emergency Alert System](#) via Wolverine Access. Also, preprogram the UM-Flint DPS telephone number (810) 762-3333 into your cell phone for quick, easy use.

Training of Personnel

All personnel are required to complete Laboratory Safety Training. Documentation of the training is required. This training can be accomplished by completing the **Comprehensive Laboratory Safety** session (**BLS009** or equivalent) via [MyLINC](#), or UM-Flint EHS on-line training or other equivalent approved by EHS. Furthermore, all personnel shall read and fully adhere to this SOP when handling Bunsen burners.

Certification

I have read and understand the above SOP. I agree to contact my Supervisor or Lab Manager if I plan to modify this procedure.

Name	Signature	UM ID #	Date

Prior Approval required – Is this procedure hazardous enough to warrant prior approval from the Principal Investigator? YES NO

Principal Investigator _____

Revision Date _____