

Safety Alert

Bunsen Burner Safety

March 2021



Fire in Wolfson Link Building (March 2021)

A fire recently occurred in one of the research laboratories in the Wolfson Link Building during use of a Bunsen Burner. Flammable gas was released from the burner which subsequently ignited causing a fire that spread rapidly. Fortunately no-one was hurt and due to the actions of the emergency services the fire was contained to the laboratory. However, the damage caused to the laboratory was significant and the consequences could have been much more severe.

Required Actions

Following this incident, we request that all individuals responsible for laboratories or workshops complete the following actions as soon as possible and highlight any significant issues arising to the SEPS team:

- Identify any processes involving Bunsen burners (and other gas burners) in your area of responsibility and review the need for them. Eliminate the use of gas where it is not required and consider the use of alternatives where possible e.g. use of disposable spreaders rather than sterilising metal loops, or burners using gas canisters rather than mains gas.
- Carry out an immediate inspection of **all** Bunsen burners and their associated tubing (including those in storage) and remove from service any that are found to be damaged, in poor condition or fitted with improvised (or inappropriate) tubing. This inspection should include:
 - Condition of the main body of the burner (i.e. is it rusty, are any parts loose, is the collar seized?)
 - Condition of the tubing (check for perishing, cracks, holes, pinch points or any other defects)
 - Check that the tubing is made of an appropriate material (e.g. neoprene, natural rubber)?
 - Does the tubing fit securely on the gas taps and the burner?
- Introduce a programme of regular inspections of gas burners, tubing and any other accessories and encourage laboratory users to inspect gas burners before use to ensure they are in good condition. If there is a need for tubing to be replaced, ensure the replacement is made of a suitable material (e.g. neoprene) and consider purchasing tubing with reinforced ends.
- Determine if an emergency gas-supply shut off is present, whether it is easily accessed and clearly labelled (shut-off valves are usually located near the of the laboratory). Note that service shut-off valves are unlikely to be suitable for emergency use due to poor accessibility. **If no emergency gas shut off is present in the laboratory please notify the SEPS team.**
- Ensure that all laboratory users are instructed in where to find the emergency gas shut-off and how to use it in an emergency (remember to include occasional lab users and regular visitors e.g. cleaning services).
- Review the need for a mains gas supply in your area of responsibility. If a gas supply is not required, contact the Estates team to determine if the supply could be removed entirely.