

Safe Operating Procedure 215

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Title	Safe Use of Chemical Fume Hoods
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Building	All
Lab No	All
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Procedure

Please Note!

Work with hazardous biological material, including all human samples and microorganisms requiring Level 2 containment, is not permitted within chemical fume hoods.

Do not use a fume hood if the risk assessment for your work indicates that 100% containment is required. There is no guarantee of complete containment when using open fronted LEV systems.

Before Use

Perform pre-use checks first thing, every day, before using the hood and immediately report any concerns to your Lab Manager.

During Use

1. Ensure number/size of items within the hood is kept to an absolute minimum.
2. Keep all items 150mm back from the sash.
3. Place larger reagent containers and equipment on stands to raise them above the air gap between the base of the rear baffle and the work surface.
4. Position larger items further back, smaller items to the front.
5. Maintain a gap of at least 50mm between the inner side walls and hood contents and between larger items.
6. The sash is intended to provide a physical barrier between you and the contents of the fume hood, affording protection in the event of splashing, spraying, explosion or fire. When working at the hood, keep the sash as low as possible and never above the specified maximum working height. In the absence of physical stops, the maximum working height must be clearly indicated on the cabinet. Close the sash fully when an experiment is running and your intervention is no longer required, before you leave the lab for a break/at the end of the day and when work is not in progress.
7. If you have to briefly raise the sash to/above head height, do not lean into the hood to the point where your face is beyond the plane of the sash.
8. The sash should only be raised above maximum working height when experiments are not in progress and all inhalation hazards have been removed or safely contained.
9. Avoid rapid movements when moving hands in and out of the hood and moving items around within the hood.
10. Do not drape gloves over or place other items upon the airfoil. It has a key role in minimising turbulence. Having a few electrical cables running under the airfoil is acceptable.

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11. Do not accumulate waste in the hood unnecessarily. Dispose of waste promptly and in accordance with SLS waste disposal procedures.
12. Low inflow/air fail alarms may still occur when the sash is within the working height range if there is air turbulence at the face of the hood. This can be caused by, for example, people walking past the hood, lab doors being opened, drafts from air conditioning units, nearby equipment that generates air currents. If an alarm activates, immediately lower the sash to a height where the inflow velocity increases sufficiently to clear the alarm.
13. If an alarm will not clear, or clears when the sash is lowered but recurs whenever the sash is raised again, stop work, close the sash fully and report the fault to your Lab Manager.
14. If experiments are running over night, post notices to this effect with clear hazard warnings and emergency contact details.
15. In the event of a chemical spill, close the sash fully, get assistance from you lab manger or a colleague, if required, and then carry out the clean up as soon as it is safe to do so.
16. Take extreme care when using heating apparatus or other ignition sources, especially if flammable solvents or other materials are present. If fire breaks out within a fume hood close the sliding sash fully and turn the fan off. This will deprive the fire of oxygen and it should extinguish. Only tackle a fire with an appropriate extinguisher if it is safe to do so, i.e. without risk to yourself or others. If the fire cannot be extinguished completely and immediately, evacuate via the nearest fire exit route activating the fire alarm as you go by pressing a red break-glass.

After Use

1. Dispose of waste as per the SLS waste disposal procedures.
2. Clean/decontaminate the fume hood appropriately.
3. Do not switch fume hood fans off (unless fire breaks out within the hood; see point 16 above). Just lower the sash fully when you finish work.