Fume Cupboard

Safe Use of Fume Cupboard

Fume cupboard is essentially a ventilated enclosure designed to **Contain** and **Exhaust** airborne contaminants.

**E.g.** Chemical Fumes, Vapours, Gases, Particulates, Dust, Etc.

- Comes with a sash (adjustable work opening)
- Prevent accumulation of toxic or hazardous airborne contaminants
- Controlled release of airborne contaminants via exhaust system
- Additional auto sash system installed
- Additional CO2 fire suppression system for SPMS fume cupboards

It is important for fume cupboard users to understand how to use it effectively to achieve the required protection against the hazardous contaminants.

Effect with the sash lowered:
Can you see the difference on the user’s exposure to the chemical fumes with the sash at different height?

Illustration of a fume cupboard works (ducted type)
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Before using the fume cupboard, check the following:

✔ Check that the exhaust fan is working

✔ Check the monitor for sufficient flow rate of air, average 0.5m/s flow

✔ Check that there is a sticker (usually on the top right side) that the fume cupboard has been maintained and the date still valid. Notify SPMS Facilities immediately if noted any fume cupboard with expired date.

✔ Check that there is no warning lights or alarm. If so, report the fault immediately (call FRC (6790 4777) or SPMS Facilities (65378686))

✔ Check that the lights are working

✔ Check for hazards such as any incompatible items/materials with what you will be working with, e.g. heating source if you intend to work with flammables

Never do these

✘ Put your head into the fume cupboard, especially when there is hazardous materials placed in it

✘ Do not place any source of ignition in the fume cupboard when flammables are present, e.g. the hot air gun, heater unit, etc

✘ For optimal operation, avoid placing large appliance or equipment in the fume cupboard as it will disrupt the air movement leading to poor discharge of hazardous fumes/ vapours
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Things to note when using a fume cupboard

- Position your apparatus and materials in the centre and back of the fume cupboard to minimize disturbance to the airflow.

- Keep your apparatus and materials at least 15cm inside the plane of the sash to ensure good containment.

- Avoid sudden rapid movements in front of the fume cupboard as these can cause turbulence and drawing the airborne containments out of the fume cupboard.

- Clean up any accidental spill of chemicals immediately.

- Avoid storage flammables or hazardous chemicals inside fume cupboard used for experimental work.

- Clean up the fume cupboard after each use.

Proper setup: Maintain at least 15cm clearance from the plane of the sash.