

Fume Cupboard Periodic Checks

Guidance for Periodic Checks of Fume Cupboards

In addition to pre-use checks by the user, it is recommended that more extensive quantitative and qualitative tests are carried out periodically between thorough examination and test dates (or if it is suspected that the air flow is not satisfactory) to confirm that the fume cupboard is still working effectively. The tests described below are applicable to most types of fume cupboard found in the University.

Any fume cupboard that fails the test must be taken out of use until rectified.

Failures must be recorded in the Issues Log (found within the logbook) and registered with the Supervisor / Laboratory Manager / Technical Services team who will inform the Estates Service Desk if the situation cannot be remedied locally.

Monthly Face Velocity Check (Anemometer Test) – trained users only

Ensure the fume cupboard is in normal operational set-up and that you have a calibrated anemometer available. Open the sash to the normal operating position. Divide the vertical plane of the opening into 9 equal sections (this may vary depending on the size of the fume cupboard). Take readings at the centre point of each section and record each reading on the grid in the "Monthly Anemometer Readings Log" (found within the logbook). Complete the rest of Monthly Anemometer Readings Log.

Record "Fail" if:

- any value is less than 0.4 m/s. (Low flow cupboards 0.3 m/s)
- if the variation is above 20%, or when the average is above 0.7 m/s

Note: Specific information about the required face velocity for your fume cupboard may also be available in the commissioning documentation supplied with the system.

Smoke Test

This is a visual test that may be carried out periodically in addition to the anemometer test and may also be useful as an extra check if the air flow does not seem to be satisfactory.

Using a 'smoke pencil' (such as a Dräger Flow Check Air Flow Indicator Kit which can be procured via OPeRA) or similar device in front of the fume cupboard aperture, observe the air flow.

Record your observations from carrying out smoke testing in the "Smoke Test/Dust Lamp Test Observations Log" (found within the logbook).

Record "Fail" if:

- You observe any turbulence or areas where smoke is not being drawn into the fume cupboard.

Dust Lamp Test

This is another visual test that may be carried out periodically to provide continued assurance that contaminants are captured and may also be useful as an extra check if the air flow does not seem to be satisfactory.

This test is appropriate for observing the flow of airborne particles (see HSE MDHS82: 'A simple tool for observing the presence of airborne particles', <https://www.hse.gov.uk/pUbns/mdhs/pdfs/mdhs82-2.pdf> for more information on this test).

Record your observations from carrying out dust lamp testing in the "Smoke Test/Dust Lamp Test Observations Log" (found within the logbook).

Record "Fail" if:

- You observe any areas where particles are not effectively being drawn away from the breathing zone and into the fume cupboard.