

In general, the University uses two different types of fume hood.

- A. , where a motor and fan draw hazardous substances from the hood along a duct and discharge them into the air (usually above roof level) where they are rapidly diluted and dispersed.

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To provide the critical information to the stakeholders engaged in the use, maintenance and testing of ducted LEV. It covers:

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The type of LEV should be assessed as suitable for the activity in the activity risk assessment (typically COSHH Assessment). Factors affecting suitability may be the type and volume of corrosive fumes or liquids generated during the activity.

Care must be taken to select a fume hood that is made of suitable materials resistant to the substances being used.

Note: not all substances can be used, e.g. anhydrous perchloric acid (>85%) should always be done in a dedicated perchloric acid fume hood. Dedicated perchloric acid fume hood and ducts are made of stainless steel.

Turn on hood (if it has on/off controls) and wait for flow to stabilise.

Raise the sash to its (indicated by sticker on side of opening). (When not working)

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Each piece of LEV has a unique identification number. These are not always in a logical order, but to change these should be subject to a full change control assessment to ensure historic documents and new documents can be collated and cross referenced without the risk of causing confusion. This number should be marked on each piece of equipment.

All required repairs must be logged via the Service Centre to ensure an electronic record of requests and status is maintained.

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The standard frequency of these statutory tests and examinations must not exceed 14 months, and must be completed by a competent contractor. There are applications where this may be required more frequently, these include, but are not limited to LEV used for safeguarding the handling of hazard group 3 microorganisms.

The requirements for statutory test and examinations are:

Competent contractor to complete work.

Maintained in accordance with BS EN 14175:2003 (for fume cupboards and appropriate standards for other types of LEV).

Include any related checks e.g. make up air, proximity to windows or drafts.

To include any include connected vented storage cupboards.

To work to a schedule agreed between the teams responsible for the operation of the building e.g. technical teams; users e.g. researchers; and teams responsible for engaging and coordinating the scheduling of the competent contractor to undertaken the statutory test and examination.

Schedules will be communicated to local areas.

A clear and agreed communication and coordination of the activities undertaken by the contractor completing the test and examination. These include but are not limited to:

- o Parties responsible for the building activities are aware and have agreed access and equipment isolation.
- o Expected condition of equipment. For example some fume cupboards contain large experiential rigs which would not be easy to remove.
- o Agreed notice of works. Some equipment available at short notice but some equipment will require many weeks' notice e.g. containment level 3.
- o Agreed communication routes e.g. mobile phone numbers provided to the contractor.
- o The contractor to be aware of what they have been provided safe access to, and anything not explicitly stated, should not be worked upon without explicit permission e.g. isolation of other systems, roof access, etc.
- o Confirmation with the equipment users to ensure they are not using the systems and to ensure roof access

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- o These steps will form part of an overall safe system of work to ensure safe completion of test and examination, including hand back of equipment.

The test certificates will be forwarded to a pre-agreed recipient who has engip8 (c)-10.996 (o)5 (m)-4.31002 (c)10

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It is important that performance of systems is monitored between the formal tests and examinations which are undertaken within 14 months for most pieces of equipment.

Routine checks and testing encompasses a broad range of equipment from fume cupboards (most commonly used equipment, through to ducted engineering extract systems and specialised biological safety cabinets. The routine checks and testing guidance is broad to cover the breadth of equipment used. These tests can include, but are not limited to:

A user checking the equipment appears to be operating in a satisfactory condition. Depending on the equipment this may include visual observation that fumes or generated dust is visibly extracted; any indicators are showing in range; no unexpected odours, no obvious damage or kinks in flexible ducts. This can be supplemented by a daily inspection check record.

There should be clear criteria on what is acceptable, and what requires the equipment to be taken out

of service. When necessary, the user should be informed of the reason for the equipment being taken out of service and the actions to be taken to return it to service.

Some local procedures will specify air flow checks. The method, acceptable range and resulting actions for out of scope readings should form part of the school procedure. In addition they may include:

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Update of the ducted LEV Procedure	Redrafting, updating and publishing the procedure. Checking function of current procedure (via inspection, reactive reports or audit). Formal procedure Governance.	H&S H&S; EFM and Users Hazardous Agents Safety Sub-Committee ¹ and the SSHEMG ²
Maintenance of five year LEV Reco.11 (i)-7.998		

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Ensure BRP or
users are
competent

Awareness and understanding of H&S legal
requirements for LEV.
Where identified by training needs analysis, specific LEV
technical / safety training (internal and/or external)

H&S
H&S or external
British Occupational
Hygiene Society
(BOHS)/ Institute of
Local Exhaust
Ventilation (ILEV)
Ven>602 5122 hpxi

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Local instructions, programmes and competence programmes	Local procedures. Record accessible locally. Competence programmes, with records if required. Local inspections to ensure processes working.	Detailed in school procedure.
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British Occupational Hygiene Society (BOHS)

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The Health and Safety Executive issued a safety alert regarding [changes to enforcement expectations for mild steel welding fume](#). The following key issues apply:

There is new scientific evidence that exposure to all welding fume, including mild steel welding fume, can cause lung cancer.

There is also limited evidence linked to kidney cancer.

There is a change in HSE enforcement expectations in relation to the control of exposure of welding fume, including that from mild steel welding.

All businesses undertaking welding activities should ensure effective engineering controls are provided and correctly used to control fume arising from those welding activities.

Where engineering controls are not adequate to control all fume exposure, adequate and suitable respiratory protective equipment (RPE) is also required to control risk from the residual fume.

Controlling airborne contaminants at work A guide to local exhaust ventilation (LEV) HSG 258
<https://www.hse.gov.uk/pubns/priced/hsg258.pdf>

BS EN 14175-2:2003 Fume cupboards. Safety and performance requirements

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