

BEST PRACTICE



This is part of a series of guidance documents produced by the NADIR FP7 project. There are various international and national standards in place for undertaking infectious work in animals with pathogens that require high containment facilities. These guidance documents be examples of how these can be practically interpreted

ANIMAL ROOMS: FUMIGATION AND SEALABILITY REQUIRMENTS

It is best practice that containment level 3 and 4 facilities should be sealable to permit disinfection by fumigation. In practice this means that if the animal room or workplace has been filled with fumigant it must be contained within the room at an appropriate concentration and for the required amount of time to allow effective disinfection. The fumigant should not be allowed to escape from the room until it is extracted safely.

The most effective means of disinfecting a whole room is to use a gaseous/ vaporised disinfectant since this will contact all surfaces. The purpose of this requirement for sealability is to prevent the escape of fumigant from the room during the fumigation process and risking the exposure of personnel and the failure of the fumigation to disinfect completely. In the UK formaldehyde has workplace exposure limit (WEL) of 2ppm presently, for both short and long term exposures periods. Formaldehyde is currently under discussion within Europe with a view to establishing an EU Indicative Occupational Exposure Limit. Alternatives to the use of formaldehyde as the fumigation agent are available such as hydrogen peroxide which is used in some institutes. However, like formaldehyde, hydrogen peroxide is a hazardous chemical having a WEL of 1ppm for long-term exposure and 2 ppm short-term exposure limit. Therefore, regardless of whether the fumigant of choice is formaldehyde, hydrogen peroxide or some other chemical the requirement for room sealability remains.

It is best practice that sealability is tested for CL 3 and CL4 animal facilities every 12 months and on commissioning for CL3 facilities and every 6 months and on commissioning for CL4 facilities. It is also recommended a visual inspection is made every month (or at the end of an experiment prior to fumigating) and if any defect noticed it is sealability checked. All inspections and testing should be logged.

Methods of undertaking sealability test are given in the link below:

<http://www.hse.gov.uk/biosafety/gmo/guidance/sealability.pdf>

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Document History

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