



Ask the Experts

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This is the second article in a series that we hope will be a continuing forum for ABSA members to obtain answers to questions of particular interest to professionals in biosafety. We will attempt to get expert advice on these topics and publish them in this column in each issue of *Applied Biosafety: Journal of the American Biological Safety Association*. We hope to have several pertinent questions and their answers in each issue. The success of this endeavor will be up to you, the membership. Please help yourself, your organization, and your fellow biosafety professionals by submitting your questions for publication.

Question:

Are there any guidelines in support of, or in opposition to, the use of fans in Biosafety Level 2 laboratories (clinical chemistry, hematology, immunology, and microbiology laboratories) when work is performed on an open bench? Is it appropriate to use electrical fans at a low setting, equivalent to the air velocity coming from a ceiling air vent?

Answer:

(John H. Keene, Biohaztec Associates, Inc.)

There are no guidelines in support of the use of floor or bench fans in Biosafety Level 2 laboratories. The ventilation of the laboratory is to be designed to take into account the health and comfort requirements of the laboratory personnel and to assure adequate removal of the heat load caused by equipment in the space. On the other hand, there are no guidelines that I could find which prohibit the use of such fans in laboratories.

It is well known that we "lab rats" tend to push the limits of our equipment and facilities and at times will overload our spaces with equipment and personnel without consideration of the consequences with regard to ventilation. Therefore, the solution to this perplexing problem may be left to the wiles of the biosafety professional to establish those times and places where such cooling/air movement may be used.

However, there are potential problems with the use of fans in laboratories. One must remember that even air movement "equivalent to the air velocity coming from a ceiling air vent" can cause disruption of the air curtain of a biosafety cabinet. Any cooling fans in the laboratory should not be in such a position that would result in an adverse effect on the containment devices in that laboratory. In addition, fans, when used, should not be directed at a hazardous work site or placed in a position that draws the potentially hazardous material towards personnel in the laboratory. Fans should also not be directed so that the directional airflow into the laboratory is compromised.

The use of fans for cooling in laboratories should be carefully evaluated and should be only a temporary measure until HVAC changes can be made to alleviate the problems encountered by excess heat in the labs.

This question has come from a biosafety professional who is required to audit laboratories for safety, which has raised concerns in my mind as well. I would appreciate any readers who have an opinion on this subject to e-mail me with comments (jkeene@biohaztec.com). I will attempt to consolidate the opinions and print them in a future edition of *Applied Biosafety*.

Question:

When shipping proficiency testing materials containing infectious agents, it is self-defeating if the outer package is labeled with the genus and species of the enclosed agents. Is there some way to avoid this?

Answer:

(Eileen Edmonson, Transportation Regulation Specialist, US DOT, Research and Special Programs Administration [RSPA])

US DOT's Hazardous Materials Regulations, 49 CFR Part 171, Paragraph 171.8 states:

“Technical name means a recognized chemical name or microbiological name currently used in scientific and technical handbooks, journals, and texts. Generic descriptions are authorized for use as technical names provided they readily identify the general chemical group or microbiological group. Examples of acceptable generic chemical descriptions are organic phosphate compounds, petroleum aliphatic hydrocarbons, and tertiary amines. For proficiency testing only, generic microbiological descriptions such as bacteria, mycobacteria, fungus, and viral samples may be used.”