



## Questions and Answers: Influenza A (H2N2) Panels

Updated Apr 22, 2005

### How should the influenza A (H2N2) viruses be destroyed?

Healthcare facilities and laboratories have been advised to treat as potentially infectious, in accordance with state medical waste regulations, all materials retained or derived from the influenza A (H2N2) proficiency testing panels created by Meridian Bioscience and sent out by the College of American Pathologists, the American Association of Bioanalysts, the American College of Physicians, and the American Academy of Family Physicians. These materials can be safely inactivated with either physical or chemical treatment methods, including sterilization using moist heat or dry heat, incineration, or treatment using disinfectant chemicals. Check your state's medical waste regulations for specific guidance addressing the use of any of these processes. General information about medical waste management can also be found in CDC's "Guidelines for Environmental Infection Control in Health-Care Facilities," available at [www.cdc.gov/ncidod/dhqp/gl\\_environmentinfection.html](http://www.cdc.gov/ncidod/dhqp/gl_environmentinfection.html).

### *Sterilization of Discarded Influenza A (H2N2) Materials*

First and foremost, check with the manufacturer of the facility's sterilizer equipment for instructions for optimal performance. They will also indicate if their equipment is appropriate for medical waste decontamination purposes. In the absence of specific instructions from the manufacturer:

- The following parameters may be used in a gravity displacement autoclave: 121 degrees C, 15-19 pounds of pressure, for at least 20 minutes. For other types of autoclaves (e.g., pre-vacuum autoclaves), check with the manufacturer for parameters needed for the sterilization of laboratory medical wastes; **or**
- These general parameters may be used for sterilization with dry heat in a dry-heat oven: 170 degrees C for 1 hour, or 160 degrees C for 2 hours, or 121 degrees C for at least 16 hours.

If the decontamination sterilizer or incinerator is offsite, the material should be sealed in an impervious bag and, if being shipped, conform with all International Air Transport Association ([www.iata.org/about/index](http://www.iata.org/about/index)) and Department of Transportation ([www.dot.gov](http://www.dot.gov)) requirements regarding packaging and labeling of infectious substances (see [www.cdc.gov/ncidod/srp/specimens/dot%20final%20rule%208-14-02.pdf](http://www.cdc.gov/ncidod/srp/specimens/dot%20final%20rule%208-14-02.pdf)). It is preferable that a microbiologist oversee the destruction of this agent to ensure compliance with CDC recommendations.

### *Chemical Disinfection of Discarded Influenza A (H2N2) Materials*

If sterilization of influenza A (H2N2) material by using an autoclave or dry heat oven is not possible and on-site incineration is not available, chemical disinfection is an alternative. Refer to state medical waste regulations for guidance in selecting appropriate chemical disinfectants and use conditions (e.g., concentration, contact time, temperature, amounts of waste to be treated) suitable for medical waste decontamination. Additionally, refer to the U.S. Environmental Protection Agency (EPA)'s List G: EPA's Registered Antimicrobial Products for Medical Waste Treatment ([www.epa.gov/oppad001/chemregindex.htm](http://www.epa.gov/oppad001/chemregindex.htm)).

Appropriate handling of the material for chemical disinfection includes the following steps:

- 1) use proper personal protective equipment,
- 2) open the vial in a certified biosafety cabinet,
- 3) immerse the vial and cap in a container with an appropriate disinfectant, using proper dilution and contact time, and
- 4) discard all disinfected materials in accordance with state medical waste regulations.

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### **How sure is CDC that the recommended procedures to destroy the influenza A (H2N2) virus are effective?**

Extensive laboratory studies conducted on influenza viruses over many years have shown these viruses can be destroyed efficiently by heat or chemical disinfectants when used for sufficient length of contact time, and for chemicals, proper use concentration. Additionally, manufacturers of medical waste treatment technologies and equipment are required by the states to provide efficacy data to support claims of microbial inactivation when their process or equipment is used. On the basis of these studies and historical experience the sterilization, incineration, and chemical disinfection procedures recommended by state medical waste regulators will destroy (kill) the influenza A (H2N2) virus.

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### **What if the laboratory or medical facility does not have an incinerator?**

If an incinerator is not available on site, the materials can be autoclaved or disinfected by using the above methods or any method approved by the state for the treatment and disposal of cultures and stocks from the laboratory.

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### **What if the autoclave/incinerator is offsite?**

If the autoclave/incinerator is offsite, the material should be sealed in an impervious bag while being transported. If the bag will be shipped, it must conform with all International Air Transport Association ([www.iata.org/about/index](http://www.iata.org/about/index)) and Department of Transportation ([www.dot.gov](http://www.dot.gov)) requirements regarding packaging and labeling of infectious substances ([www.cdc.gov/ncidod/srp/specimens/DOT%20Final%20Rule%208-14-02.pdf](http://www.cdc.gov/ncidod/srp/specimens/DOT%20Final%20Rule%208-14-02.pdf)).

**NEW! Apr 22, 2005**

### **Can laboratories use the same autoclave to destroy the influenza A (H2N2) panels that is used to sterilize medical instruments?**

No. While any autoclave can inactivate microorganisms, it is not considered safe practice to use a sterilizer dedicated for sterile supply preparation (as found in operating rooms and central sterilization departments) for decontamination purposes. Use a sterilizer earmarked as a decontamination sterilizer.

**NEW! Apr 22, 2005**

### **What should be done if the influenza A (H2N2) samples are accidentally spilled on a laboratory working surface?**

Environmental Protection Agency (EPA)-registered hospital disinfectants with label claims for influenza A viruses can be used according to manufacturers' instructions for proper dilution and contact time. If EPA-registered disinfectants are not available, a 1:10 dilution of household bleach (containing 5250 - 6000 ppm) can be used; a contact time of at least 10 minutes is recommended. If a spill of influenza H2N2 material occurs on a working surface, apply disinfectant to the spill and use absorbent material to take up as much of the spill as possible. Clean the surface and disinfect as previously described. Discard the absorbent materials as a regulated medical waste.

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### **Should serologic testing be performed on laboratory personnel who may have been exposed to the influenza A (H2N2) virus strain?**

Routine testing of laboratory personnel who may have worked with the influenza A (H2N2) panels is not recommended in the United States at this time. The biosafety level 2 (BSL-2) precautions required for this agent would be expected to protect workers from exposure and infection, and therefore the risk of transmission is considered low. However, CDC is recommending that laboratories monitor their workers' health for influenza-like illness (i.e., temperature of 100 degrees F or greater and cough or sore throat) if they either worked with the samples directly or possibly sustained occupational exposure to the influenza

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A (H2N2) test samples within the 10 days. If a laboratory worker with recent exposure to the influenza A (H2N2) samples develops such symptoms, clinical specimens should be obtained and tested for influenza A virus. Commercially available rapid test kits for influenza and other methods for rapid detection of influenza, such as indirect fluorescent antibody assay (IFA), direct fluorescent antibody assay (DFA), and polymerase chain reaction (PCR), should be used. If the sample is positive for influenza A virus, contact your state health department and CDC immediately at (770)-488-7100.

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### **Does the current situation with regard to H2N2 pose a public health threat in the United States?**

There currently is no evidence that anyone has been infected with the influenza A (H2N2) proficiency testing samples but monitoring is ongoing. Although the risk posed by this situation is low, CDC, the Department of Health and Human Services, and the World Health Organization, along with the providers of these proficiency testing panels, are taking extensive precautions to ensure that all influenza A (H2N2) proficiency testing samples are destroyed and that there is no threat to human health.

For more information, visit [www.cdc.gov/flu](http://www.cdc.gov/flu),  
or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).