

Treatment and Disposal of Biological Materials

Proper treatment and disposal of cultures and items contaminated by potentially biohazardous agents is a vital step toward protection of laboratory and service personnel from infectious disease. This waste handling process is also necessary to prevent release of potentially infectious agents into the community at large. Treatment and disposal of biological waste is regulated by several federal and state agencies. General guidelines for handling this waste stream are provided below. Questions regarding these procedures should be directed to the Office of Research Safety at 2-4996 or tom@rags.kent.edu

Sharps

Sharps are generally agreed to be the most hazardous items in the potentially infectious waste stream. A high degree of precaution must always be taken with any sharp item, contaminated or not. All sharps (hypodermic, intravenous, or other needles and syringes; pasteur pipettes; scalpel or razor blades; blood vials; glass microscope slides and coverslips; and any other broken laboratory glassware) must be placed immediately upon disposal into a sharps disposal container.

Cultures, stocks, & disposable labware

All non-sharp laboratory materials utilized in experiments with biological materials (e.g., microorganisms, recombinant DNA, animal or human tissues, cell cultures, etc.) must be treated prior to disposal by an approved decontamination method such as autoclaving. If autoclaving is used, waste materials should be collected in an autoclavable bag that is stored in a container displaying the international biohazard label.

After autoclaving, any bag displaying the biohazard symbol must be overbagged with an opaque trash bag and sealed prior to disposal in the regular waste stream. Clear autoclave bags (without the biohazard symbol) do not require overbagging and may be sealed and placed in the regular waste stream. Bags with the biohazard symbol, **regardless of use**, must not be placed, without overbagging, in the regular waste stream.

Other methods for decontamination exist (e.g., decontamination by bleach, ethanol, etc.). Autoclaving may not always be a suitable method.

Research Animals

All of the tissues or organs from small research animals (e.g., cats, dogs, rabbits, rats, mice, birds, etc.) **must be incinerated**.

There are no exceptions to this policy without prior notification and approval by the Biological Safety Committee.

Bedding

Bedding from animals is to be treated and disposed by incineration. Package bedding as described above for pathological wastes. Materials not packaged or labeled properly may be refused.

For Your Information

Biological Safety Cabinets

Biological Safety Cabinets (vertical laminar flow hoods) provide protection for workers using potentially hazardous biological materials. In addition, these units protect the work (e.g., cell or tissue cultures) from contamination from the laboratory environment. Biological Safety Cabinets should be certified once per year to assure proper operation and continued worker and product protection.

Research with Biological Materials

Any research involving recombinant DNA molecules; human, animal, plant pathogens; or human materials (including cell lines) must be registered for review by the Biological Safety Committee. Registration forms and other relevant documents may be obtained by contacting the Office of Research Safety, tbialke@kent.edu

Occupational Exposure to Bloodborne Pathogens

Federal regulations require that workers who have reasonably anticipated exposure to human blood and certain other human materials must be trained in the proper and required use of controls to prevent direct contact with these materials. Please contact the Office of Research Safety at 2-4996, or tbialke@kent.edu to determine whether these regulations apply to your worksite.