

Autoclaving of Infectious Waste

Information provided by the University of Pennsylvania Department of Environmental Health and Radiation Safety

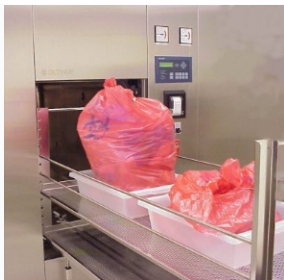


An autoclave is a specialized piece of equipment designed to deliver steam generated heat under pressure to a sealed chamber, with the goal of decontaminating or sterilizing its contents.

What materials are autoclaved?

- Autoclave all cultures and stocks of infectious agents, consumables used in the manipulation of said cultures, recombinant DNA (rDNA), human and infectious animal tissue waste, cages and bedding of potentially infected animals, and reusable lab ware.

- DO NOT AUTOCLAVE items contaminated with solvents, volatile or corrosive chemicals, radioactive materials, or items containing carcinogens, mutagens or teratogens.



Autoclave Etiquette:

- DO

- Use a secondary container to prevent spills in the autoclave
- Remove material from the autoclave in a timely manner
- Place autoclaved waste in appropriate waste collection bins

- DO NOT

- Leave autoclaved material in the autoclave overnight (plastic bags may break down, spilling their contents in the autoclave chamber)
- Leave any waste bags on the floor
- Abort someone else's autoclave cycle

How to use an autoclave:

- Before Autoclaving

- Ensure that you have received thorough training on the use and operation of the instrument.
- Wear appropriate PPE while loading and unloading the autoclave, including heat resistant gloves, lab coat, and eye protection. A face shield should be worn if a splash hazard is present.



- ONLY use autoclavable biohazard bags.
- Use a heat resistant SECONDARY CONTAINER to retain any leakage that may occur.
- DO NOT overfill bags or autoclave chamber as this decreases its effectiveness.
- Leave bags unsealed to allow for steam penetration.
- Fill liquid containers only ½ full and loosen caps or use vented closures.

- During Autoclaving

- DO NOT autoclave liquid and dry material together.
- Segregate autoclave loads (infectious waste, liquid, or labware).
- DO NOT LEAVE AUTOCLAVED MATERIAL IN AUTOCLAVE OVERNIGHT!!!

- After Autoclaving

- **HOT, HOT, HOT!** - Allow materials to cool down for 15-20 minutes prior to their removal.
- Always handle autoclaved material with HEAT RESISTANT GLOVES.
- ALWAYS make sure the pressure has gone to ZERO before opening the door!
- Use extreme CAUTION when opening an autoclave door – there still may be steam inside the chamber after the pressure has dropped to zero which can cause severe burns.