

# Medical Pathological Waste (MPW)

## Examples of MPW

## MPW Contaminated with Radioactive Materials or Hazardous Chemicals

## Decontaminate

## Disinfectants

## Steam Sterilization/ Autoclave

### Waste must not be contaminated with radioisotopes or hazardous chemicals

- Waste containing or contaminated with the infectious or pathogenic agent(s)
- Pathological waste includes: animal carcasses and anatomical waste (organs, tissue from humans or animals)
- Sharps containers (scalpels, razor blades, Pasteur pipettes, micro-fine pipette tips, capillary pipettes, pathology glass slides, all needles, and syringes). (See "Sharps" section.)
- Animal bedding contaminated with pathogenic agents which cannot be decontaminated through autoclaving
- Any material potentially contaminated with cytotoxic or cytostatic drug(s): empty cytotoxic or cytostatic drug vials, drug dispensing apparatus, patient care materials, towels, absorbent material, or similar materials
- Other discarded materials that are regulated as medical waste by the U.S. Department of Transportation, state or local laws

### General Information

- For disposal of MPW which contains or is contaminated with radioactive material or hazardous chemicals, refer to the [Multihazardous Waste Section](#)

### MPW Minimization - Converting MPW to General Waste:

- Examples of MPW which may be converted to general waste through decontamination/inactivation:
  - Liquid clinical specimens (urine, blood)
  - Patient care materials: towels, absorbent material, or similar materials
  - Cultures and media
- For assistance with decontamination procedures, call your Health and Safety Specialist, (301) 496-2346

- Suitable chemical disinfectants include:

– Sodium hypochlorite (bleach at 5.25%), (**Mercury Free**), 1:10 dilution

### Always use a disinfectant appropriate to the infectious material you wish to inactivate

- Use autoclavable Biohazard bags imprinted with process indicator: (small: NSN-6530-01-282-6378; medium: NSN-6530-01-142-2255; large: NSN-6530-01-218-4644)
- Place in an autoclavable pan for transporting and autoclaving.
- Add 50 ml water to the autoclave bag BEFORE closing, secure with autoclave tape, but not air-tight
- Waste must be processed for 60 minutes at a minimum 121° Centigrade
- Allow bags to cool, discard bag and contents: use the Disposable Labware & Broken Glass box;  
**Don't discard autoclave biohazard bags in the general waste dumpster (place in MPW boxes)**
- Chemical indicator should be included in every run to ensure adequate sterilization

**Note: Autoclaves must be maintained to manufacture specification and validated monthly**



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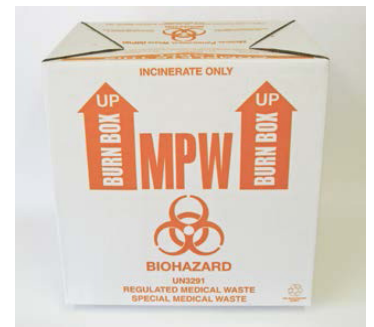


# Medical Pathological Waste (MPW)

Use MPW Box Kit  
ONLY for MPW

## The MPW Box (“Burn Box”)

- The MPW box kits (five boxes, ten bags, and plastic bag closure ties) are available from the NIH Self-Service Store and NIH Stock Catalog (NSN-8115-00-L04-0680). **Use 2 bags per box for double containment**
- The MPW box **MUST NOT** be used for disposal of general waste such as soda cans, papers, cardboard, bottles, etc., or for storage or moving laboratory equipment, office equipment, or household items
- The MPW box **MUST NOT** contain free liquids
- Only use the two black plastic bags that come with the MPW box
- Only use NIH authorized MPW box. Please contact DEP (301) 496-7990 for any questions and concerns



## Packing Procedure

**Pathological waste (tissues and carcasses) MUST be packaged separately from other MPW to avoid odors and sanitation problems**

1. Fold the flaps down on the outside of the box.
2. Place TWO plastic bags (one inside the other) into the box and pull the bag tops down over the flaps
3. A filled MPW box should weigh NO MORE than 40 pounds or be no more than 3/4 full
4. Close each bag SEPARATELY. Twist plastic bag at the top, bend the twisted portion to form a loop, and seal using the plastic bag closure tie
5. Close the box. Fold Flap A down into the box, fold the B Flaps over Flap A, push Flap C down to lock with Flap A
6. PRINT your building, room number, and waste type (pathological or non-pathological) on the box top label area



“Sharps” (needles,  
syringes, scalpel/  
razor blades,  
microfine pipette tips,  
etc.)

## Waste Management Procedures

- Do not recap, bend, remove, or clip needles
- Place intact needles and syringes in the sharps container:  
(small: NSN-6530-01-294-2865; medium: NSN-6530-01-274-5099). **Do not use large sharps containers that may not fit in an MPW Box**
- Fill 3/4 full, snap the lid closed, and discard container in an MPW box
- Do not compress or pack down materials in container
- Items or apparatus that require a large sharp box, please contact DEP for the guidance (E.g., Da Vinci Surgical Apparatus).
- Contact DEP for assistance for safe and proper disposal of sharps (needles & syringes) for personal use at work.



## Labware

- Chemical decontamination
  - Submerge the labware for 30 minutes in an appropriate disinfectant solution
  - Collect disinfectant solution as chemical waste. **It is prohibited to discard the disinfectant solution down the sink drain**
  - Discard labware in Disposable Labware & Broken Glass box
  - If glassware/labware cannot be chemically decontaminated, it must be autoclaved to decontaminate

Cell Culture Media,  
Blood and Body Fluids  
or Solid Media

- All materials contaminated with agents used BSL-2, or lower practices must be packed in a clear autoclave bag. Autoclave or chemically decontaminate and transfer into disposable labware box/solid waste.
- All materials contaminated with agents used at BSL-3 or BSL-2/3 practices must be packed as MPW after decontamination
- Decontaminate chemically or by autoclaving.
- For chemical decontamination, use an appropriate chemical decontaminant following manufacturer’s directions
  - Let stand for 30 minutes
  - Decontaminated fluid must be collected as chemical waste and called for pick up by Chemical Waste Services
  - Dispose of empty decontaminated cell culture vessel in Disposable Labware & Broken Glass box

## MPW Totes Program

- DEP has started a new MPW Totes program for the NIH animal facilities, which allows collecting a larger volume of medical pathological waste and thus reducing the frequency of waste collection pickups. In addition, this program provides a cost savings to the institute through the elimination of MPW box purchases as well as incineration cost savings via reduced MPW weight. Please contact DEP for more information.

## MPW Collection Services

### Building 10

- Packaged and labeled MPW from laboratories and patient care areas are to be placed in corridors for collection by the medical waste contractor 7:30 a.m. – 2:30 p.m. Seven days a week

### Building 10C, ACRF, Animal Facilities in Building 10

- Packaged and labeled MPW will be picked up from the 10C elevator lobby 7:30 a.m. – 2:30 p.m. Seven days a week

### Animal Facilities in Building 14 A, D and E

- Packaged and labeled MPW will be picked up from the 14 A,D and E alleyway 7:30 a.m. – 2:30 p.m. Seven days a week

### Other NIH Buildings on Campus, including Animal Facilities

- Take packaged and labeled MPW, as specified in packaging procedures above, to building loading dock or designated cold room 7:30 a.m. – 2:30 p.m. Monday through Friday (except holidays)

### NIH Buildings off Campus

- Packaged and labeled MPW, as specified in packaging procedures above, to building loading dock or designated cold room Collected on scheduled days

**NOTE: After 2:30 p.m., Monday through Friday, weekends or holidays, MPW boxes should be stored in an appropriate refrigerator or freezer until disposal is available.**

