

SOP: Waste Disposal and Biosafety Measures

This SOP details **waste disposal and biosafety measures**, covering proper segregation, handling, storage, and disposal of hazardous and non-hazardous waste, biosafety protocols to prevent contamination and infection, use of personal protective equipment, decontamination procedures, and compliance with regulatory requirements. The goal is to minimize environmental impact, ensure workplace safety, and protect public health through effective waste management and biosafety practices.

1. Purpose

To establish standardized procedures for safe disposal of waste and implementation of biosafety measures in the workplace to reduce risks to personnel and the environment.

2. Scope

This SOP applies to all staff, contractors, and visitors involved in activities that generate or handle waste material within the facility.

3. Responsibilities

- **All Personnel:** Follow procedures, report incidents, and use protective equipment.
- **Safety Officer/Biosafety Officer:** Monitor compliance, provide training, and oversee waste management.
- **Supervisors:** Ensure all team members adhere to the SOP.

4. Definitions

- **Hazardous Waste:** Waste posing substantial or potential threats to public health or the environment.
- **Non-Hazardous Waste:** Waste that does not pose immediate health risks.
- **Biosafety:** Procedures to protect individuals and environment from exposure to infectious agents or biohazards.

5. Waste Segregation

Type of Waste	Examples	Container/Color
Biological/Infectious	Cultures, disposables, sharps	Biohazard bag (Red/Orange)
Chemical Hazardous	Solvents, reagents	Chemical-resistant container (Clearly labeled)
Sharp Objects	Needles, blades	Puncture-proof sharps container (Yellow)
Non-Hazardous	Paper, packaging	General waste bin (Black/Green)

6. Handling and Storage

- Always wear appropriate **PPE** (gloves, lab coats, masks, eye protection).
- Label all waste containers clearly with type of waste and date.
- Store hazardous waste separately and in designated areas only.
- Do not fill containers beyond $\frac{3}{4}$ full. Secure lids at all times.
- Transport waste to storage/disposal areas along designated routes to prevent spills.

7. Disposal Procedures

- Follow local, regional, and national regulations for waste disposal.
- Use only licensed vendors for hazardous waste removal.
- Autoclave infectious waste before disposal where required.
- Decontaminate non-disposable equipment before reuse or disposal.
- Record all disposal activities in waste management logs.

8. Biosafety Measures

- Follow all biosafety protocols as per facility guidelines.
- Perform regular handwashing and equipment disinfection.
- Report any exposures, spills, or injuries immediately to supervisor and Safety Officer.
- Participate in biosafety and waste management trainings annually.

9. Personal Protective Equipment (PPE)

- Wear appropriate PPE as per the type of waste handled.
- Inspect PPE before use and replace defective gear immediately.
- Remove contaminated PPE carefully and dispose of according to guidelines.

10. Decontamination Procedures

- Use approved disinfectants for surfaces, tools, and spills.
- Perform scheduled cleaning of waste storage and disposal sites.
- Autoclave or chemically disinfect reusable equipment where applicable.

11. Compliance and Documentation

- Retain records of waste generation, storage, and disposal as required by law.
- Conduct periodic audits and inspections for compliance.
- Update SOP as regulations or technologies change.

12. References

- Local and national regulations (e.g., OSHA, EPA, CDC, WHO).
- Facility's Safety Manual and Biosafety Manual.

13. Revision History

Date	Version	Description	Author
2024-06-22	1.0	Initial SOP release	[Author Name]