



ANNEX 10: WASTE MANAGEMENT FOR MEDICINAL PRODUCT MANUFACTURERS

10.1 PURPOSE

These guidelines provide suggestions on how to manage pharmaceutical waste, maintaining and updating an inventory of pharmaceutical waste streams, managing waste storage sites, and disposing of waste material. Pharmaceutical waste that exhibits a characteristic of hazardous must be managed and disposed of separately.

10.2 SCOPE

There are two (2) categories of pharmaceutical waste that need to be managed and they are defined as follows:

Hazardous Waste: Waste pharmaceuticals that must be segregated and managed as such. These include antineoplastic agents, radioactive agents, hormonal products, penicillins, solvents from laboratory.

Non-Hazardous Pharmaceutical Waste: All other pharmaceutical waste not included in one above.

10.3 SOLID WASTE MATERIALS

10.3.1 Solid Waste (non- hazardous) - Garbage, refuse, sludge, industrial waste and other discarded materials. Solid waste management should predominantly regulated at the local level and be managed in accordance with local environmental regulations.



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- 10.3.2 The management of solid waste should involve its collection, transport, processing and recycling or disposal. Collection should include the gathering of solid waste and recyclable materials, and the transport of these materials, after collection, to the location where the collection vehicle is emptied. This location may be a material processing facility, a transfer station or a landfill disposal site.
- 10.3.3 Waste disposal can be done primarily by land filling or closure of existing dump sites. Modern sanitary landfills are not dumps; they are engineered facilities used for disposing of solid wastes on land without creating hazards to public health or safety,
- 10.3.4 Provision should be made for the proper and safe storage of waste materials awaiting disposal.
- 10.3.5 Waste material should not be allowed to accumulate. It should be collected in suitable receptacles for removal to collection points outside the buildings and disposed of safely and in a sanitary manner at regular and frequent intervals.

10.4 LIQUID WASTE MATERIALS

- 10.4.1 If liquid effluent poses a safety or contamination risk, the effluent should be treated in Effluent Treatment Plant before being discharged to a municipal drain.
- 10.4.2 After treatment in ETP, water should be sampled for analysis (pH, Biochemical oxygen demand (B.O.D) and chemical oxygen demand (COD)) to check quality before being discharged to municipal drain.



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10.4.3 Effluent treatment is the process of removing contaminants from waste water . It includes physical, chemical, and biological processes to remove physical, chemical and biological contaminants. Its objective is to produce an environmentally safe fluid waste stream (or treated effluent) and a solid waste (or treated sludge) suitable for disposal or reuse (usually as farm fertilizer).