

SARASWATI

COLLEGE OF PHARMACY

— Mohali, Punjab —

Waste Management



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1. Introduction

Saraswati College of Pharmacy is committed to environmental sustainability, regulatory compliance, and responsible waste management practices. As a pharmacy institution involved in teaching, laboratory research, and possibly animal house activities, the college generates different categories of waste, including general waste, chemical waste, biomedical waste, e-waste, and liquid waste.

The College recognizes its responsibility to ensure that waste is managed in a manner that protects public health, complies with statutory requirements, and minimizes environmental impact. This policy establishes a systematic framework for waste segregation, handling, storage, treatment, disposal, and monitoring.

Operational mechanisms include composting of biodegradable waste and the operation of sewage treatment facilities, authorized biomedical and hazardous waste disposal, centralized e-waste management, water conservation practices, rainwater harvesting, and periodic environmental audits.

The institution ensures compliance with the Solid Waste Management Rules, 2016, Biomedical Waste Management Rules 2016, E-Waste Management Rules, 2016, Hazardous Waste Management Rules; and CPCB/SPCB guidelines.

A Waste Management Committee oversees implementation, monitoring, vendor management, coordination, training programs, financial planning, and sustainability reporting.

Annual performance audits and quarterly review meetings ensure accountability and measurable progress toward sustainability goals aligned with SDGs 11, 12 and 14.

2. Policy Statement

Saraswati College of Pharmacy adopts the principles of:

- **Waste Hierarchy Approach:**
Prevention → Minimization → Reuse → Recovery → Safe Disposal
- **Best Practicable Environmental Option (BPEO)** in waste handling.

The College shall:

- Ensure compliance with applicable environmental legislation, including:
 - Solid Waste Management Rules
 - Biomedical Waste Management Rules

- Hazardous Waste Management Rules
- E-Waste Management Rules
- Minimize waste generation at source.
- Ensure safe storage and disposal through authorized agencies.
- Promote environmental awareness among students and staff.

3. Scope of Policy

This policy applies to academic blocks, laboratories, hostels, cafeterias, administrative offices, gardens, and residential areas. It covers solid waste, liquid waste, biomedical waste, e-waste, and hazardous chemical waste.

4. Objectives

The objectives of this policy are:

1. To ensure safe and legally compliant waste management.
2. To minimize waste generation at the source.
3. To promote reuse and recycling wherever feasible.
4. To ensure safe handling of hazardous and biomedical waste.
5. To define roles and responsibilities clearly.
6. To prevent environmental contamination.
7. To maintain proper documentation and records.
8. To conduct regular audits and ensure continuous improvement.

5. Vision, Mission, and Core Values

Vision: To establish a zero-waste, environmentally sustainable campus.

Mission:

- To implement effective segregation, recycling, and disposal systems.
- To minimize the environmental footprint.
- To create awareness and promote responsible environmental behavior.

Core Values:

Environmental stewardship, compliance, accountability, transparency, and continuous improvement.

6. Governance Structure

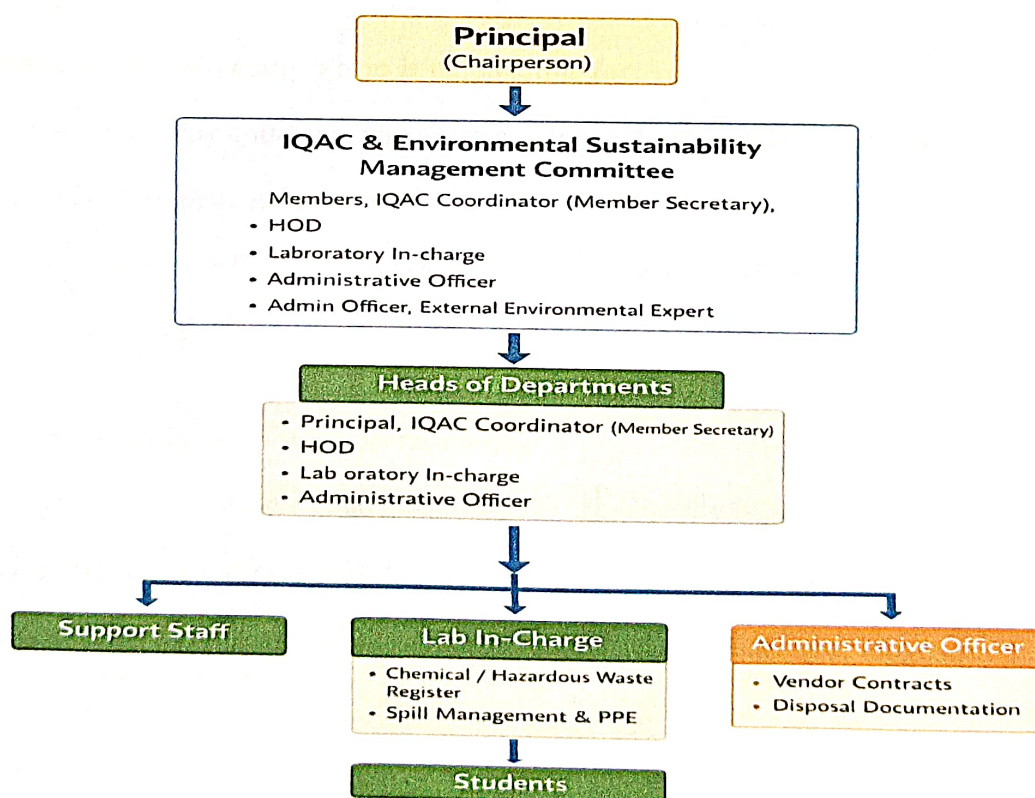
Waste Management & Environmental Sustainability Committee

Designation	Role
Principal	Chairperson
IQAC Coordinator	Member Secretary
HOD	Member
Laboratory In-charge	Member
Administrative Officer	Member

7. Organization and Management

Organization and Management

Waste Management Policy - Saraswati College of Pharmacy



7.1 IQAC / Environment Sustainability Management Cell is responsible for:

- i) Providing advice and guidance to all departments regarding proper waste segregation, storage, and disposal practices.
- ii) Setting Environmental Performance Indicators (KPIs) for waste management.
- iii) Monitoring compliance with Solid Waste, Biomedical Waste, Hazardous Waste, and E-Waste Rules.
- iv) Conducting internal audits and reporting annually to the College management.
- v) Monitoring and auditing all waste disposal contractors working for the College.
- vi) Organizing training programs and awareness activities for staff and students.
- vii) Coordinating submission of required documentation to regulatory authorities (if required).
- viii) Investigating incidents such as chemical spills, improper disposal, or non-compliance cases.

7.2 Support Staff / Housekeeping Team is responsible for:

- i) Overseeing the day-to-day collection and segregation of general and recyclable waste.
- ii) Ensuring proper placement and maintenance of color-coded bins across campus.
- iii) Monitoring contractor performance in waste collection and transportation.
- iv) Liaising with the IQAC / Sustainability Cell to implement standard operating procedures.
- v) Maintaining the cleanliness of waste storage areas.
- vi) Compiling waste transfer records and assisting in the preparation of waste statistics.

7.3 Heads of Department are responsible for:

- i) **Non-Hazardous Waste:** Ensuring that no hazardous or biomedical waste is disposed of through general waste streams.

ii) Hazardous and Laboratory Waste: Nominating a 'Responsible Person' within the department to coordinate safe handling and disposal of chemical, hazardous, and laboratory waste.

iii) Reporting: Informing the Principal and IQAC about the nominated 'Responsible Person' and updating details whenever changes occur. The tenure of the nominated person shall be a minimum of two years.

iv) Compliance: Ensuring laboratory waste registers and disposal documentation are properly maintained.

7.4 Laboratory In-charge is responsible for:

- i) Maintaining chemical waste register and hazardous waste inventory.
- ii) Ensuring labelling, compatibility, storage, and safe containment of chemicals.
- iii) Coordinating disposal with the authorized hazardous waste agency.
- iv) Ensuring availability of spill kits and PPE in laboratories.

7.5 Administrative Officer is responsible for:

- i) Managing waste disposal contracts and agreements.
- ii) Maintaining waste transfer manifests and disposal certificates.
- iii) Ensuring renewal of agreements with authorized vendors.

7.6 Staff / Supervisors (including contractual staff) are responsible for:

- i) Disposing of waste responsibly through appropriate segregation systems in offices, laboratories, and campus areas.
- ii) Reporting any issues related to waste collection or hazardous disposal to the concerned Head of Department or IQAC.
- iii) Following safety guidelines while handling laboratory or hazardous waste.

7.7 Students are responsible for:

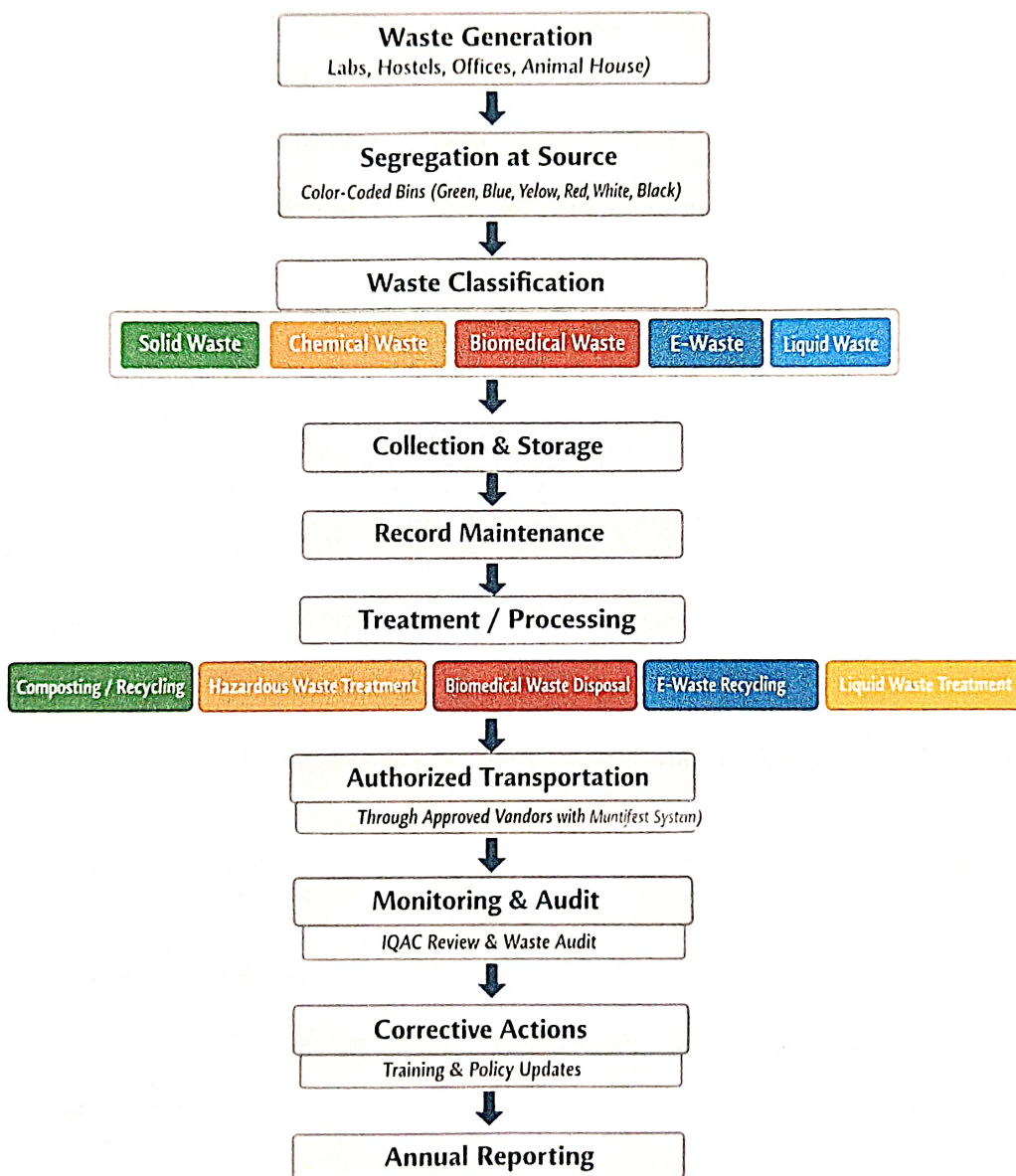
- i) Disposing of waste responsibly through designated color-coded bins.
- ii) Following laboratory safety and biomedical waste disposal procedures.
- iii) Reporting any improper disposal or unsafe practices to the concerned faculty or the Head of Department.

iv) Participating in environmental awareness and green campus initiatives.

8. Action Plan

To ensure effective implementation of the Waste Management Policy, Saraswati College of Pharmacy shall adopt the following structured Action Plan:

Waste Management Action Plan Saraswati College of Pharmacy



8.1 Reporting of Hazardous and Laboratory Waste

i) It shall be mandatory for the Head of the Department / Principal Investigator (Project) / Laboratory In-charge to report any changes or additions in hazardous or biomedical waste generation.

ii) Departments shall submit quarterly reports to the IQAC / Waste Management Committee detailing:

- Type of waste generated
- Quantity of hazardous waste
- Measures taken to minimize waste generation

iii) Efforts shall be made to reduce waste generation per practical batch and per research project.

8.2 Storage and Disposal of Hazardous Waste

i) As per Hazardous Waste Management Rules, hazardous waste shall not be stored for more than 90 days.

ii) Proper records shall be maintained regarding:

- Storage
- Transfer
- Disposal

iii) Disposal shall be carried out only through State Pollution Control Board (SPCB) authorized agencies.

iv) Design and operation norms for storage facilities shall strictly follow regulatory guidelines.

8.3 Waste Hierarchy Implementation

The College shall implement the Waste Hierarchy approach in the following order:

Prevention → Minimization → Reuse → Energy Recovery → Proper Disposal → Landfill/Incineration

i) Waste avoidance and minimization shall be prioritized at source.

ii) Departments shall adopt measures such as:

- Micro-scale laboratory experiments were feasible
- Reuse of solvents through distillation (where applicable)
- Controlled dispensing of chemicals
- Digital documentation to reduce paper use

8.4 Reuse, Recovery, and Recycling of Non-Hazardous Waste

- i) Paper waste shall be collected separately and sent for recycling.
- ii) Plastic and packaging waste shall be handed over to authorized recyclers.
- iii) Organic waste from canteens and hostels shall be composted (where feasible).
- iv) Scrap materials such as broken furniture, glassware, and metal items shall be segregated and disposed of through approved scrap vendors.

8.5 Safe Disposal of Biomedical Waste

- i) Biomedical waste shall be segregated using prescribed color-coded bins.
- ii) Waste shall be stored in designated secure areas.
- iii) Disposal shall be done through an authorized biomedical waste disposal agency.
- iv) Logbooks and disposal certificates shall be maintained for compliance verification.

8.6 Chemical Waste Neutralization

- i) Minor quantities of acids and alkalis may be neutralized under controlled laboratory conditions before disposal (where permitted).
- ii) Incompatible chemicals shall never be mixed.
- iii) Expired chemicals shall be labelled clearly and stored separately for authorized disposal.

8.7 E-Waste Management

- i) An inventory of obsolete and surplus electronic items shall be maintained by the IT Department.
- ii) E-waste shall be stored in a secure, designated area.
- iii). Disposal shall be carried out only through SPCB-authorized e-waste recyclers.
- iv) Disposal certificates shall be preserved for record and audit purposes.

8.8 Liquid Waste Management

- i) Laboratory effluents shall be treated (neutralized, diluted as required) before discharge.
- ii) Wastewater shall be connected to municipal drainage or an approved treatment system.
- iii) Used oil from DG sets shall be stored separately and disposed of through authorized recyclers.

8.9 Daily Waste Collection and Municipal Coordination

- i) General waste shall be collected daily and handed over to municipal authorities or authorized contractors.
- ii) Degradable and non-degradable waste shall be segregated before disposal.
- iii) Coordination shall be maintained with the Municipal Corporation for regular waste lifting.

8.10 Awareness and Capacity Building

- i) Training programs shall be conducted annually for faculty, staff, and students.
- ii) Orientation programs shall include waste segregation guidelines.
- iii) Posters and signage shall be displayed across campus.
- iv) Green Campus initiatives shall be promoted under NSS / Eco Club activities


8.11 Monitoring and Documentation

- i) Quarterly monitoring shall be conducted by the Waste Management Committee.
- ii) Annual Waste Audit shall be performed and reported to IQAC.
- iii) Records shall include:
 - Hazardous waste register
 - Biomedical waste logbook
 - E-waste inventory
 - Waste transfer manifests
 - Vendor agreements

iv) Performance shall be evaluated based on Environmental Performance Indicators (EPIs).

8.12 Review and Continuous Improvement

- i) The Action Plan shall be reviewed annually.
- ii) Corrective measures shall be implemented for identified gaps.
- iii) Policy revision shall be done every three years or as per regulatory amendments.

 Principal
Principal
SARASWATI COLLEGE OF PHARMACY
GHARUAN, MOHALI - 140413
Saraswati College of Pharmacy