



CRITERION7	7.1 Institutional Values and Social Responsibilities
Institutional Values and Best Practices	
<i>7.1.3 Facilities in the institution for the management of the degradable and non-degradable waste</i>	

**FACILITIES IN THE INSTITUTION FOR THE MANAGEMENT OF THE
FOLLOWING TYPES OF DEGRADABLE AND NON-DEGRADABLE WASTE**

7.1.3 WASTE MANAGEMENT SYSTEM

Sethu institute of technology is equipped with facilities for the management of degradable and non-degradable wastes generated in the campus.

7.1.3 (1) SOLID WASTE MANAGEMENT

Monthly average solid waste produced is around 10,078 kg. It has 802 kg of paper, 3800 kg of horticultural waste, 2806 kg of food, 110 kg of glass and metals, 40kg of biomedical waste, 2400kg of domestic waste and 120kg of ash. Solid Waste is segregated at source and collected in Green, Yellow and Blue Dustbins. Each category was weighed and disposed of separately to Waste haulers and Municipality. No waste is burnt inside the Campus, all the combustible waste is collected by the Municipality for proper disposal.

7.1.3 (2) LIQUID WASTE MANAGEMENT

Wastewater comprises of sewage and sullage, used water from cooking, shower, cloth washing and ultimately going down a sink. Annual average wastewater generated in campus is 85,965 Litres. It is treated by Sewage Treatment Plant (STP) of 4 lakh Litres capacity using FBBR technology.

7.1.3 (3) BIOMEDICAL WASTE MANAGEMENT

BIO-MEDICAL WASTE MANAGEMENT POLICY

The Biomedical waste means any waste which is generated during the diagnosis, treatment of human beings or in research activities for example, the production or testing of biological samples. It shall be the duty of an institution generating bio-medical waste which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, and pathological laboratory should take all steps to ensure that such waste is handled without any adverse effect to human health and the environment.

1. The Segregation, Packaging, Transportation and Storage shall be done as under:-
2. Bio-medical waste shall not be mixed with other wastes.

3. Bio-medical waste shall be segregated into containers/bags at the points of generation in accordance with Schedule-I. prior to its storage transportation, treatment and disposal. The containers shall be labeled according to Schedule-II.
4. No untreated bio-medical waste shall be kept stored beyond a period of 48hours.
5. The college is signed MoU with Meenakshi Mission Hospital & Research Centre for Biomedical waste management which regularly collects waste generated by the college dispensary.
6. The college also has one solid-waste compost place for managing bio-degradable waste in a sustainable manner out of the campus area.
7. The college normally does not generate hazardous waste. However, in the Biotechnology and Biomedical department labs, sterilization is performed by autoclaving and then the remaining wastes are properly disposed of, in accordance with standard waste disposal norms.

SCHEDULE I

CATEGORIES OF BIO-MEDICALWASTE

Waste Category No.	Waste Category [Type]	Treatment and Disposal
Category No. 1	Human Anatomical Waste (human tissues, organs, body parts)	incineration/deep burial
Category No. 2	Microbiology & Biotechnology Waste (wastes from laboratory cultures, stocks, dishes and devices used for transfer of cultures)	local autoclaving/micro-waving/incineration
Category No. 3	Waste sharps (Needles, syringes, scalpels, blades, glass, etc. that may cause puncture and cuts. This includes both used and unused sharps)	Disinfection/chemical treatment/autoclaving/micro-waving and mutilation / shredding

Category No. 4	Discarded Medicines and Cytotoxic drugs (wastes comprising of outdated, contaminated and discarded medicines)	incineration/destruction and drugs disposal in secured landfills
Category No. 5	Solid Waste (Items contaminated with blood, and body fluids including cotton, dressings, soiled plaster casts, lines, beddings, other material contaminated with blood)	Incineration/autoclaving/microwaving
Category No. 6	Liquid Waste (waste generated from laboratory and washing, cleaning, house-keeping and disinfecting activities)	disinfection by chemical treatment and discharge

SCHEDULE II

COLOUR CODING AND TYPE OF CONTAINER FOR DISPOSAL OF BIO-MEDICAL WASTES AT SETHU INSTITUTE OF TECHNOLOGY


Colour Coding	Type of Container -I Waste Category	Treatment options as per Schedule I
Yellow	Plastic bag Cat.2, and Cat.5.	Incineration
Red	Disinfected container/plastic bag Cat. 2, Cat. 5.	Autoclaving/Chemical Treatment
Blue	Plastic bag/puncture proof container Cat. 4	Autoclaving/Chemical Treatment and destruction/shredding

Black	Tissue paper / container Cat. 4	Disposal in landfill secured
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Note: Waste collection bags for waste types needing incineration shall not be made of chlorinated plastics.

BIOMEDICAL WASTE MANAGEMENT IN SIT

The Biomedical Engineering Department in Sethu Institute of Technology is following the above mentioned waste management policy for segregating all bio-medical waste materials generated in the college dispensary as well as in the pathology and microbiology lab. Microbiological waste is disposed of after proper autoclaving. On monthly basis nearly 2 Kg biomedical waste is collected from lab activities and college dispensary. Regular monitoring of waste collection and disposal is carried out by lab in charges and technical assistant. All the biomedical wastes such as lancets, blood-stained cotton, and tissue paper are sent to the Meenakshi Mission Hospital & Research Centre for Biomedical waste management, which regularly collects waste for disposal of biomedical wastes.


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7.1.3 (4) E-WASTE MANAGEMENT

E-waste is the used and obsolete electronic products destined for refurbishment, reuse, and resale and salvaging. SIT-SNA department takes care of e-waste management. Old PCs, UPS and Printers are sent to scrap dealers for safe disposal. However, the following policies are adopted to reduce the e-waste in campus;

- Buy Less and optimize the resources in-house
- Online resources such as drop box or Amazon's AWS cloud are being used
- Give away or donate your e-waste (Rotaract club and nearby schools)



Computer donation program to Government School , Tiruchuli

- Take them back to the store or Buy-Back Program

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QUOTATION

M/s. Sethu Institute of Technology,
Pulloor.

Our Ref. No : SPSS/100455
Date : 03.03.2021

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- Obsolete e-waste were used for demonstration purpose in laboratories

7.1.3 (5) WASTE RECYCLING SYSTEM

Institute has a comprehensive waste management system comprises of vermin - composite system, STP based wastewater recycling, Disposal of chemical and hazardous waste materials.

A) SOLID WASTE MANAGEMENT USING VERMI COMPOST SYSTEM

The organic waste, food waste and ash are mixed together in pre-digestion tank by mixing cattle dung (25kg) for 20 days. After 20 days, contents are transferred into compost tank. Composting is done using African Earthworm (*Eudrillus euginae*) in a composting tank of size 6'x3'x2.5'. After 45 days of composting, it is harvested and used as manure for plantations and gardens.

B) UTILIZATION OF WASTE WATER TREATED (LIQUID WASTE)& RO REFUSE

Around 1,00,000 liters per day of STP treated effluent have been recycled and used for gardening, lawns and fountains in the campus. RO Plant reject water quality is within the permissible reusable limit; hence, it is used for vehicle cleaning purpose in Transport section.

C) MANAGING PLASTIC, MERCURY AND CHEMICAL WASTE

Housekeeping personnel are responsible for the disposal of fluorescent lights, batteries, etc., Segregation and disposal of plastic waste is being properly done. Demolition wastes, including asbestos, Mercury containing thermostats are handled and discarded by trained housekeeping personnel. The chemical wastes from various laboratories are disposed off safely as per the procedure recommended by SIT-Chemical Safety Manual.

7.1.3 (6) HAZARDOUS CHEMICALS AND RADIOACTIVE WASTE MANAGEMENT

Chemicals used in Chemistry, Chemical and Biomedical departments are classified as Corrosives, Water reactive, Flammable chemicals, Pyrophorics, peroxide forming chemicals, diluting organic peroxides are labeled with name of the chemical hazard class, pictogram, hazards and information for safe handling. Further, safety data sheets are kept in the laboratories for the safe handling of chemicals. Hazardous chemical waste management is

done effectively in the SIT campus following the provisions of the SIT-Chemical Safety Manual.