



HOSPITAL BIO-MEDICAL WASTE MANAGEMENT POLICY

Mahe Institute of Dental Sciences, Mahe has its bio-medical waste management policy in compliance with Puducherry Pollution Control Committee.

At our institute of Dental Sciences, Mahe, Biomedical waste is managed according to its type and characteristics. For waste management to be effective, the waste is managed at every step, from collection to disposal.

The following are the steps of our comprehensive waste management system:

- Waste evaluation
- Segregation
- Accumulation and storage
- Transportation
- Treatment and disposal
- Waste minimization

Waste Evaluation

In this step we differentiate and quantify the waste generated.

Here we also determine the points of generation, the type of waste at each point and the level of generation and disinfection within the dental hospital. This helps to determine the method of disposal.

Waste segregation

Waste segregation in our college consists of placing different kinds of wastes in different containers or coded bags at the point of generation, which is in compliance with the bio medical waste management rules, 1998 and its timely modifications.


Waste segregation is undertaken by experienced staffs that are equipped with protective gowns, masks and gloves. Segregation also helps to contain the spread of infection and reduces the chances of infecting other health care workers.

Waste accumulation and storage

Waste accumulation and storage occurs between the point of waste generation and site of waste treatment and disposal. While accumulation refers to the temporary holding of small quantities of waste near the point of generation, storage of waste is characterized by longer holding periods and large waste quantity.

Storage areas are posted with 'EXPLICIT' signs.




Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallor, Mahe -673310
UT of Puducherry

Waste transportation

Infectious and solid waste once collected, weighed and stored are transported to the disposal facility at Palakkad by IMAGE – an IMA – Kerala state branch supported facility in closed container tanker lorries for treatment and disposal.

Waste treatment

Waste treatment is mainly required to disinfect or decontaminate the waste, right at source so that it is no longer the source of pathogenic organisms. After such treatment, the residue can be handled safely, transported and stored.

- Needles and syringe nozzle - shredded in needle destroyer and syringe cutters
- Scalpel blades/ Lancet/ Broken glass - are put in separate containers with bleach, transferred to the common bio medical waste management facility.
- Glassware is disinfected, cleaned and sterilized
- Culture plates with viable culture should be autoclaved; media are placed in appropriate bags and disposed off. The plates are reused after sterilization.
- Gloves are shredded / cut / mutilated before disposal.
- Disposable items are often recycled and have the risk of being used illegally. Dipping in freshly prepared 1% sodium hypochlorite for 30 min. - one hour, followed by mutilation before disposal should be the policy adopted for such items.
- Liquid waste generated by the laboratory is either pathological or chemical in nature. Non-infectious wastes are neutralized with reagents.
- Liquid infectious waste are treated with a chemical disinfectant for contamination and then neutralized.

Waste disposal

Waste disposal is through an organized facility provided by IMAGE – an IMA – Kerala state branch supported facility on everyday basis.

Waste minimization

All measures are being undertaken to decrease the amount of infectious waste generated which will simultaneously decrease the cost of infectious waste disposal.



Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallor, Mahe -673310
UT of Puducherry



THE SAFE HANDLING AND DISPOSAL OF HEALTHCARE WASTE

INTRODUCTION

This policy is based upon the main following relevant statutory provisions and guidance:

1. The Prevention of Air and Water Pollution, 1974, 1981
2. The Air Prevention and Control of Pollution, 1981.
3. The Environmental Protection Act, 1986.
4. Handling and Management of Hazardous Waste Rule in 1989.
5. The Biomedical Waste Management and Handling Rules, 1998.

Definitions

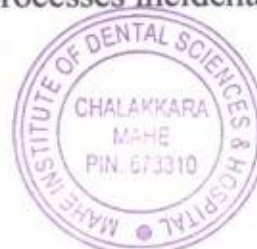
1. "Authorization" - means permission granted by the prescribed authority for the generation, collection, reception, storage, transportation, treatment, processing, disposal or any other form of handling of bio-medical waste in accordance with these rules and guidelines issued by the Central Government or Central Pollution Control Board as the case may be.

2. "Authorized person" - means an occupier or operator authorized by the prescribed Authority to generate, collect, receive, store, transport, treat, process, dispose or handle bio-medical waste in accordance with these rules and the guidelines issued by the Central Government or the Central Pollution Control Board, as the case may be.

3. "Biological"- means any preparation made from organisms or micro-organisms or product of metabolism and biochemical reactions intended for use in the diagnosis, immunization or the treatment of human beings or animals or in research activities pertaining thereto.

4. "Bio-medical waste"- means any waste, which is generated during the diagnosis, Treatment or immunization of human beings or animals or research activities pertaining there to or in the production or testing of biological or in dental health camps.

5. "Bio-Medical Waste Treatment and Disposal Facility" - means any facility wherein treatment, disposal of bio-medical waste or processes incidental to such treatment and



Dr. Anil Meloth, MDS
Principal
Mahe Institute of Dental Sciences & Hos
Chalakkara, P.O. Pallor, Mahe -673310
UT of Puducherry



MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL
Affiliated to Pondicherry Central University, Recognized by Dental Council of India
Chalakkara, P.O. Pallor, Mahe-673 310
U.T. of Puducherry. Ph : 0490 2337765

disposal is carried out, and includes common bio-medical waste treatment facilities.

6. "Handling"- in relation to bio-medical waste includes the generation, sorting, segregation, collection, use, storage, packaging, loading, transportation, unloading, processing, treatment, destruction, conversion, or offering for sale, transfer, disposal of such waste.

7. "Health care facility" - means a place where diagnosis, treatment or immunization of human beings is provided irrespective of type and size of health treatment system, and research activity pertaining thereto. In pretext to these guidelines these health care facilities includes District Hospitals, Sub Divisional Hospitals, Community Health Centres, Primary Health Centres and Sub centres.

8. "Management" - includes all steps required to ensure that bio- medical waste is managed in such a manner as to protect health and environment against any adverse effects due to handling of such waste.

9. "Occupier" - means a person having administrative control over the institution and the premises generating bio-medical waste, which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank, health care facility and clinical establishment, irrespective of their system of medicine and by whatever name they are called Occupier.

10. "Operator of a common bio-medical waste treatment facility" - means a person who owns or controls a Common Bio-medical Waste Treatment Facility (CBWTF) for the collection, reception, storage, transport, treatment, disposal or any other form of handling of bio-medical waste.


11. "Prescribed authority"- mean the State Pollution Control Board in respect of State and Pollution Control Committee in respect of Union Territory.

12. "Point of Generation"- means the location where wastes initially generate, accumulate and is under the control of the operator of the waste-generating process.

13. "Storage"- means the holding of bio medical waste for a temporary period at the end of which the bio-medical waste is treated or disposed.

14. "Treatment"- means any method, technique, or process, including neutralization,




Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallor, Mahe -673310
U.T. of Puducherry



designed to change the physical, chemical, or biological characteristics or composition of any hazardous waste.

Classification of Healthcare Waste

Health Care Facilities (HCFs) are primarily responsible for management of the healthcare waste generated within the facilities, including activities undertaken by them in the community. The health care facilities, while generating the waste are responsible for segregation, collection, in-house transportation, pre-treatment of waste and storage of waste, before such waste is collected by Common Bio-medical Waste Treatment Facility (CBWTF) Operator. Thus, for proper management of the waste in the healthcare facilities the technical requirements of waste handling are needed to be understood and practiced by each category of the staff in accordance with the BMW Rules, 2016.

Waste generated from the healthcare facility is classified as:

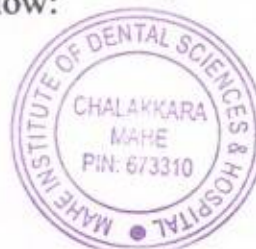
- Bio Medical Waste
- General Waste
- Other Wastes

a) Bio Medical Waste:

Bio-medical waste means any waste, which is generated during the diagnosis, treatment or immunization of human beings or animals or research activities pertaining thereto or in the production or testing of biological or in health camps. Bio-Medical waste includes all the waste generated from the Health Care Facility which can have any adverse effect to the health of a person or to the environment in general if not disposed properly. All such waste which can adversely harm the environment or health of a person is considered as infectious and such waste has to be managed as per BMW Rules, 2016.

The quantity of such waste is around 10% to 15% of total waste generated from the Health Care Facility. This waste consists of the materials which have been in contact with the patient's blood, secretions, infected parts, biological liquids such as chemicals, medical supplies, medicines, lab discharge, sharps metallic and glassware, plastics etc.

Bio Medical Waste Management Rules, 2016 categorises the bio-medical waste generated from the health care facility into four categories based on the segregation pathway and colour code. Various types of bio medical waste are further assigned to eachone of the categories, as detailed below:



Dr. Anil Melath
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallor, Mahe -673310
UT of Puducherry

1. Yellow Category
2. Red Category
3. White Category
4. Blue Category
5. Black Category

These categories are further divided as per the type of waste under each category as follows:

Table 1: Categories of Biomedical Waste

CATEGORY	TYPE OF WASTE
YELLOW	Human Anatomical Waste Human tissues, organs, body parts and fetus below the viability period (as per the Medical Termination of Pregnancy Act 1971, amended from time to time).
	Animal Anatomical Waste Experimental animal carcasses, body parts, organs, tissues, including the waste generated from animals used in experiments or testing in veterinary hospitals or colleges or animal houses.
	Soiled Waste Items contaminated with blood, body fluids like dressings, plaster casts, cotton swabs and bags containing residual or discarded blood and blood components.
	Discarded or Expired Medicine Pharmaceutical waste like antibiotics, cytotoxic drugs including all items contaminated with cytotoxic drugs along with glass or plastic ampoules, vials etc.
	Chemical Waste Chemicals used in production of biological and used or discarded disinfectants
	Chemical Liquid Waste Liquid waste generated due to use of chemicals in production of biological and used or discarded disinfectants, Silver X - ray film developing liquid, discarded Formalin, infected secretions, aspirated body fluids, liquid from laboratories and floor washings, cleaning, house - keeping and disinfecting activities etc
	Discarded linen, mattresses, beddings contaminated with blood or body fluid, routine mask & gown.
	Microbiology, Biotechnology and other clinical laboratory waste (Pre-treated) Microbiology, Biotechnology and other clinical laboratory waste: Blood bags, Laboratory cultures, stocks or specimens of microorganisms, live or attenuated vaccines, human and animal cell cultures used in research, industrial laboratories, production of biological, residual toxins, dishes and devices used for cultures.
RED	Wastes generated from disposable items such as tubing, bottles, intravenous tubes and sets, catheters, urine bags, syringes without needles, fixed needle syringes with their needles cut, vacutainers and gloves
WHITE	Waste Sharps including metals Needles, syringes with fixed needles, needles from needle tip cutter or burner, scalpels, blades, or any other contaminated sharp object that may cause puncture and cuts. This includes both used, discarded and contaminated metal sharps
BLUE	Broken or discarded and contaminated glass including medicine vials and ampoules except those contaminated with cytotoxic wastes.



Dr. Anil Meetha
 Principal
 Mahe Institute of Dental Sciences & Hospital
 Chalakara, P.O. Pallor, Mahe -673310
 UT of Puducherry

BLACK

Silver alloy mixed with Mercury
Dental Amalgam

b) General Waste

General waste consists of all the waste other than bio-medical waste and which has not been in contact with any hazardous or infectious, chemical or biological secretions and does not include any waste sharps. This waste consists of mainly:

1. News paper, paper and card boxes (dry waste)
2. Plastic water bottles (dry waste)
3. Aluminium cans of soft drinks (dry waste)
4. Packaging materials (dry waste)
5. Food Containers after emptying residual food (dry waste)
6. Organic / Bio-degradable waste - mostly food waste (wet waste)
7. Construction and Demolition wastes.

These general wastes are further classified as dry wastes and wet wastes and should be collected separately. This quantity of such waste is around 85 % to 90 % of total waste generated from the facility. Such waste is required to be handled as per Solid Waste Management Rules, 2016 and Construction & Demolition Waste Management Rules, 2016, as applicable.

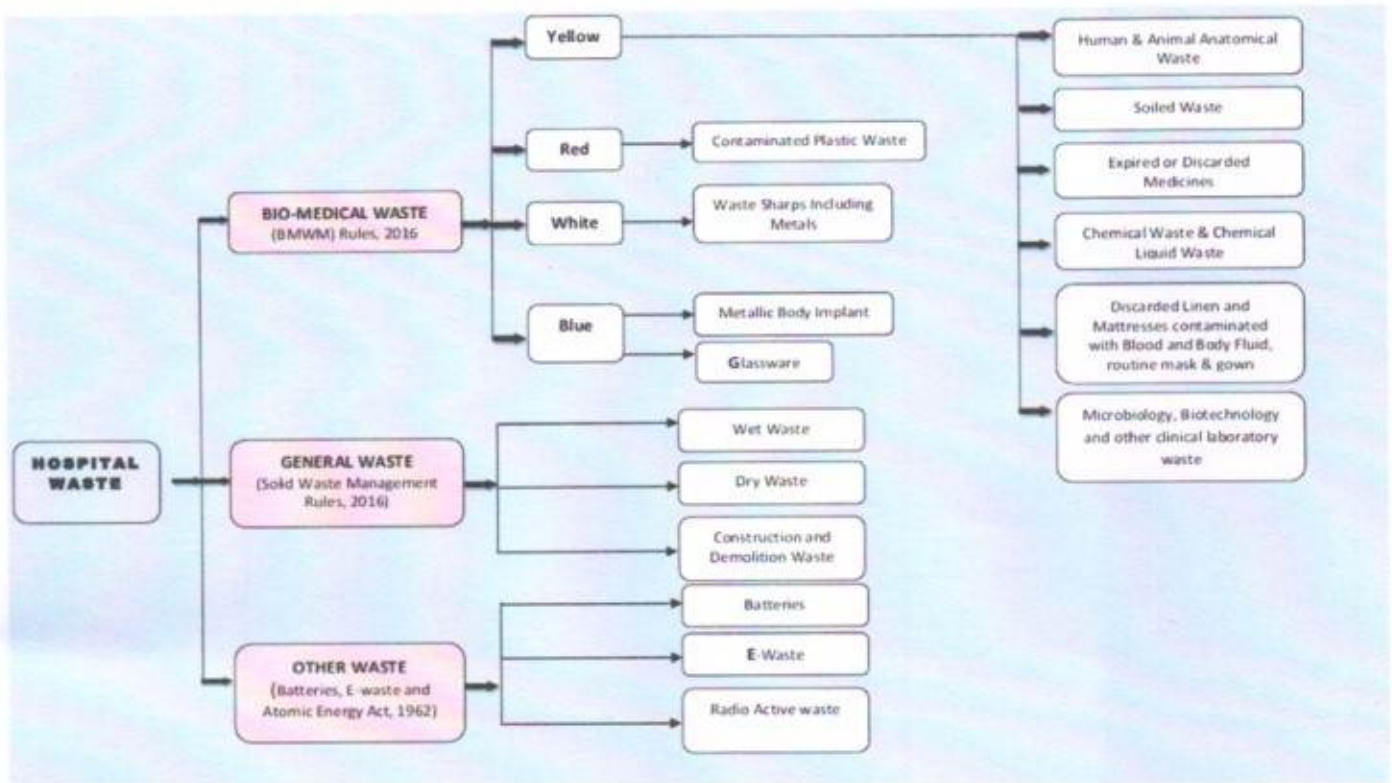
c) Other Wastes

Other wastes consist of used electronic wastes, used batteries, and radio-active wastes which are not covered under biomedical wastes but have to be disposed as and when such wastes are generated as per the provisions laid down under E-Waste (Management) Rules, 2016, Batteries (Management & Handling) Rules, 2001, and Rules/guidelines under Atomic Energy Act, 1962 respectively.



Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallor, Mahe -673310
UT of Puducherry

Figure 1: Categorization & Classification of Wastes in Health Care Facilities.





Steps involved in Bio-medical Waste Management:

The management of bio-medical waste can overall be summarized in the following steps;

- Waste Segregation in color coded and barcode labeled bags/ containers at source of generation
- Pre-treat Laboratory and Highly infectious waste
- Intra-mural transportation of segregated waste to central storage area
- Temporary storage of biomedical waste in central storage area
- Treatment and Disposal of biomedical waste through CBWTF or Captive facility


1. Bio Medical Waste Segregation:

- Waste must be segregated at the point of generation of source and not in later stages.
- Posters / placards for bio-medical waste segregation should be provided in all the wards as well as in waste storage area.
- Adequate number of colour coded bins / containers and bags should be available at the point of generation of bio-medical waste.
- Provide Personnel Protective Equipment to the bio-medical waste handling staff.

S. No.	Category	Type of waste	Colour & Type of Container
1.	Yellow Category	<ul style="list-style-type: none"> - Human Anatomical Waste - Animal Anatomical Waste - Soiled Waste - Discarded or Expired Medicine - Microbiology, Biotechnology and other clinical laboratory waste - Chemical Waste (yellow-e) - Chemical Liquid Waste 	<p>Yellow coloured non-chlorinated Plastic Bags</p>  <p>Note: (i) Chemical waste (yellow-e) comprising of un-used, residual or date expired liquid chemicals including spent hypo of X-Ray, should be stored in yellow container</p>
2.	Red Category	Contaminated Waste (Recyclable)	<p>Red Coloured Non Chlorinated Plastic Bags (having thickness equal to more than 50 µ) and Containers</p> 




Dr. Anil Melath, MDS
 Principal
 Mahe Institute of Dental Sciences & Hospital
 Chalakkara, P.O. Pallor, Mahe -673310
 UT of Puducherry

3.	White Category	Waste Sharps including metals	White Coloured translucent, puncture proof, leak proof, Temper Proof containers 
4.	Blue Category	<ul style="list-style-type: none"> • Glassware • Metallic Implants Body	Puncture proof, leak proof boxes or containers with blue coloured marking  Cardboard Box with Blue marking 

5. Black Category

Silver alloy mixed with Dental Amalgam

Black colored non bags

2. Bio Medical Waste Collection:

Time of Collection

Bio-medical waste should be collected on daily basis from each departments of the dental college hospital at a fixed interval of time. There can be multiple collections from any departments during the day if need arises.


Collection times should be fixed and appropriate to the quantity of waste produced in each area of the health-care facility.

General waste should not be collected at the same time or in the same trolley in which bio-medical waste is collected.

Collection should be daily for most wastes, with collection timed to match the pattern of waste generation during the day.

Bio-medical waste collected by the staff, should be provided with protective gowns, masks and gloves.




Dr. Anil Melath, MDS
 Principal
 Mahe Institute of Dental Sciences & Hospital
 Chalakkara, P.O. Pallor, Mahe - 673310
 UT of Puducherry



Packaging

Bio-medical waste bags and sharps containers should be filled to no more than three quarters full. Once this level is reached, they should be sealed ready for collection.

Plastic bags should never be stapled but may be tied or sealed with a plastic tag or tie.

Replacement bags or containers should be available at each waste-collection location so that full ones can immediately be replaced.

Colour coded waste bags and containers should be printed with the bio-hazard symbol, labelled with details such as date, type of waste, waste quantity, senders name and receiver's details as well as bar coded label to allow them to be tracked till final disposal.

Labelling

All the bags/ containers/ bins used for collection and storage of bio-medical waste, must be labelled with the Symbol of Bio Hazard or Cytotoxic Hazard as the case may be as per the type of waste in accordance with the BMW Rules, 2016.

Interim Storage

Interim storage of bio medical waste is discouraged in different departments of the college.

No waste should be stored in patient care area and procedures areas such as Operation Theatre. All infectious waste should be immediately removed from such areas.

In absence of dirty utilities/ sections such BMW must be stored in designated place away from patient and visitor traffic or low traffic area.

Record Keeping

Every healthcare facility need to maintain the records w.r.to category wise bio-medical waste generation and its treatment disposal on daily basis.

Category wise quantity of waste generated from the facility must be recorded in Bio Medical Waste Register/logbook being maintained at central waste collection area under the supervision of one designated person.

A weighing machine as per the specifications given in CPCB guidelines for bar code system needs to be kept in central waste collection centre of the hospital.



Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallor, Mahe -673310
UT of Puducherry



SEGREGATION, TREATMENT AND DISPOSAL OF BMW

1. Yellow Category

Type of Waste: Yellow (a): Human Anatomical Waste

Segregation:

Human tissues, body parts. This includes extracted tooth, tissues and bones.

Type of bag and container:

Collect the waste in yellow colored non chlorinated plastic bag and store in yellow coloured container

Treatment and Disposal:

No treatment of waste is required to be carried out at the health care facility. Yellow category waste along with pre-treated waste should be stored in central storage point and must be handed over to the common bio medical treatment facility.

Type of Waste: Yellow (c) - Soiled Waste

Segregation:

Items contaminated with blood/body fluids like dressings, plaster casts, die stones, dental stones, impression compounds, alginate, cotton swabs and bags containing residual or discarded blood and blood components. This includes used infectious material such as caps, shoe-cover, blotting paper/gauze, wooden swab stick, paraffin blocks, green stick wax, modelling wax, indicators tapes and disposable (single use non-linen based) masks and gowns.

Type of bag and container:

Collect the waste in yellow coloured non chlorinated plastic bag and store in yellow coloured container

Treatment and Disposal:

No treatment of waste is required to be carried out at the health care facility. Waste must be handed over to CBWTF

Type of Waste: Yellow (d) - Expired and Discarded Medicine

Segregation:



Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallor, Mahe -673310
UT of Puducherry



MAHE INSTITUTE OF DENTAL SCIENCES & HOSPITAL
Affiliated to Pondicherry Central University, Recognized by Dental Council of India
Chalakkara, P.O. Pallor, Mahe-673 310
U.T. of Puducherry. Ph : 0490 2337765

Pharmaceutical waste like antibiotics, cytotoxic drugs including all items contaminated with cytotoxic drugs along with glass or plastic ampoules, vials etc.. This includes cytotoxic drugs dispensed in dextrose / saline bottles and disposables used in delivery of cytotoxic drugs.

Type of bag and container:

Collect all the expired and discarded medicines except for cytotoxic drugs waste in a separate yellow colored non chlorinated plastic bag (different form being used for human anatomical waste) and store in yellow colored container.

All the cytotoxic drugs including all items contaminated with cytotoxic drugs along with glass or plastic ampoules, vials etc must be collected in separate yellow colored non chlorinated plastic bag labelled as cytotoxic hazard.

Treatment and Disposal:

No treatment of waste is required to be carried out at the health care facility. As per BMW Rules, 2016 all the expired and discarded medicines including cytotoxic drugs expired cytotoxic drugs are either returned back to the manufacturer or are handed over to the CBWTF to be disposed of through incineration at temperature > 1200 degree C.

Type of Waste: Yellow (e) - Chemical Waste

Segregation:

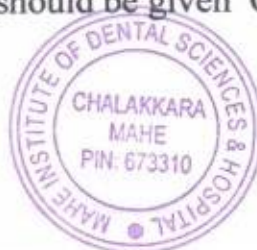
Liquid waste generated due to use of chemicals in production of biological and used or discarded disinfectants, silver X Ray film developing liquid, discarded formalin, infected secretions, aspirated body fluids, liquid from laboratories and floor washings, cleaning, house-keeping and disinfecting activities, etc. Leftover, unused, residual or date expired liquid chemicals shall not be discharged as chemical liquid waste.

Type of bag and container:

Not applicable

Treatment and Disposal:

As per the BMWM Rules 2016, for middle and small healthcare facilities having no system of separate drainage/collection system, the liquid waste is required to be collected on-site in containers for pre-treatment before mixing the same with other wastewater. Silver X ray film developing fluid should be given CBWTF as chemical waste.



Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallor, Mahe -673310
UT of Puducherry



Type of Waste: Yellow (f) - Discarded Linen, body fluids, routine mask and gown.

Segregation

This includes discarded linen re-usable routine masks and gowns.

Type of bag and container:

Collect the waste in yellow coloured non-chlorinated plastic bag and store in yellow coloured container

Treatment and Disposal:

Disinfect the waste linen with non-chlorinated chemical disinfection and hand over to the CBWTF operator for final disposal by incineration.

Disposable (single use non-linen based) masks and gowns, after use shall be treated as yellow-c (soiled waste).

Type of Waste: Yellow (g): Microbiology, and Other Clinical Laboratory Waste:

Segregation:

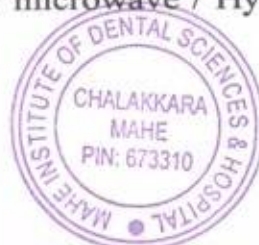
Microbiology and other clinical laboratory waste, waste blood bags (containing date expired or contaminated blood), Laboratory cultures, stocks or specimen of micro-organisms, live or attenuated vaccines, human cell cultures used in research, industrial laboratories, production of biological, residual toxins, dishes and devices used for cultures. This includes plastic culture plates and other highly infectious wastes.

Type of bag and container:

Collect the waste in yellow coloured non chlorinated plastic bag and store in yellow coloured container

Treatment and Disposal:

Pre-treatment by disinfection before handing over the waste to CBWTF operator. Pre-treatment can be done by autoclave / microwave / Hydroclave. Pre-treatment can also



Dr. Anil M. S. R., MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallor, Mahe -673310
UT of Puducherry



be done by using non-chlorinated chemical disinfectants like aldehydes, lime based powders or solutions, ozone gas, ammonium salts and phenolic compounds.
The pre-treated waste bags should be handed over to CBWTF operator on daily basis.

Red Category

Segregation:

Red category waste is contaminated recyclable waste containing primarily plastics generated from disposable items such as tubing, bottles, intravenous tubes and sets, syringes and gloves. This includes waste pipette tips, plastic pipette, drains, oxygen mask, thick plastic splash proof gowns, vials not containing blood samples.

Type of bag and container: Collect the waste in red coloured non chlorinated plastic bag and store in red coloured container

Treatment and Disposal:

Contaminated recyclable waste containing mainly plastics and rubber shall be put in red coloured non chlorinated plastic bags and containers. Syringes after removing/cutting the needles should also be put in this category. No onsite treatment of Red category waste is required. All such waste is needed to be sent to CBWTF for final treatment and disposal.

White Category

Segregation

This waste comprises of needles, syringes with fixed needles, needles from needle tip cutter or burner, scalpels, blades, or any other contaminated sharp object that may cause puncture and cuts. This includes waste sharps such as insulin pen needle, lancet needle, eye needle.

Type of bag and container:

Collect the waste in white translucent, puncture proof, leak proof, tamper proof container.

Treatment and Disposal:

After collection in puncture proof, leak proof, tamper proof container, handover the waste to CBWTF without any alteration or onsite treatment.



Dr. Anil Math, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallor, Mahe -673310
UT of Puducherry



Blue Category

Type of Waste: Blue (a) Glassware

Segregation:

Broken or discarded and contaminated glass including medicine vials and ampoules except those contaminated with cytotoxic wastes. This includes glass slides and glass pipettes

Type of bag and container:

Puncture proof, leak proof boxes or containers with blue coloured marking

Treatment and Disposal:

Dispose of the empty glass bottles by handing over to CBWTF without any onsite treatment. The residual chemicals in glass bottle should be collected as chemical waste in yellow coloured container / bags and over to CBWTF as yellow(e) waste.

Type of Waste: Blue (b) Metallic Body Implants

Segregation

Implants used for . This include

Type of bag and container:

Puncture proof, leak proof boxes or containers with blue coloured marking.

Treatment and Disposal:

Dispose of the waste by handing over to CBWTF.

Black Category

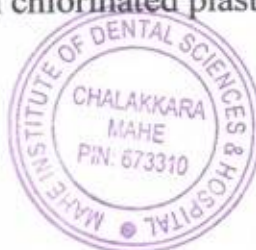
Type of waste: Dental Amalgam / Silver alloy mixed with Mercury

Segregation:

All mercury contaminated scraps, old or fractured restorative materials.

Type of bag/ container:

Collect the waste in black coloured non chlorinated plastic bag.



Dr. Anil Arulath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallor, Mahe -673310
UT of Puducherry



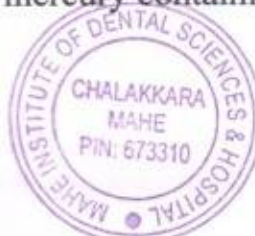
Treatment and Disposal:

Dispose of all mercury contaminated scraps, old or fractured restorative materials by handing over to CBWTF without any onsite treatment.

SPILL MANAGEMENT PROCEDURES

In case of mercury spill, the following steps as given in CPCB guidelines on "Environmentally Sound Techniques for Mercury Waste Generated from Healthcare Facilities" shall be followed;

- Evacuate area: As far as possible, keep people who are not involved in the cleanup away from spill area to limit exposures and to prevent the spread of contamination.
- Put on face mask: In order to prevent breathing of mercury vapour, wear a protective face mask.
- Remove jewellery so that the mercury cannot combine (amalgamate) with the precious metals.
- Put on rubber or latex gloves. If there are any broken pieces of glass or sharp objects, pick them up with care. Place all broken objects on a paper towel, fold the paper towel and place in a puncture proof yellow bag or container. Secure the plastic bag/container and label it as items contaminated with mercury.
- Locate all mercury beads and look for mercury in any surface cracks or in hard-to-reach areas of the floor. Check a wide area beyond the spill. Use the flashlight to locate additional glistening beads of mercury that may be sticking to the surface or in small cracked areas. Cardboard sheets may be 'used to push the spilled beads of mercury together'.
- A syringe (without a needle) shall be used to suck the beads of mercury. Collected mercury should be placed slowly and carefully into an unbreakable plastic container/glass bottle with an airtight lid half filled with water. After removing larger beads, use sticky tape to collect smaller hard-to-see beads. Place the sticky tape in a punctured proof yellow bag and secure properly. Commercially available powdered sulphur or zinc stains mercury a darker colour and can make smaller beads easier to see (powder sulphur may be used because (i) it makes the mercury easier to see since there may be a color change from yellow to brown and (ii) it binds the mercury so that it can be easily removed and suppresses the vaporization of any missing mercury).
- Place all the materials used during the cleanup, including gloves, mercury spills collected from the spill area into a yellow plastic bag or container with lid and sealed properly and labelled as mercury containing waste.



Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallor, Mahe -673310
UT of Puducherry



- Sprinkle sulphur or zinc powder over the area. Either powder will quickly bind any remaining mercury. In case, zinc powder is used, moisten the powder with water after it is sprinkled and use a paper towel to rub it into cracks in the flooring. Use the cardboard and then dampened paper towels to pick up the powder and bound mercury. Place all towels and cardboard in a yellow plastic bag and seal all the bags that were used and store in a designated area. All the mercury spill surfaces should be decontaminated with 10 % sodium thiosulfate solution. Keep a window open to ventilate after the cleanup. After ensuring all the mercury has been removed, resume normal vacuuming and utilize the cleaned area for routine operation.
- All the bags or containers containing items contaminated with mercury should be marked properly and labelled as waste mercury containing. This waste shall be categorized as yellow-e chemical waste.

BMW MANAGEMENT AT OUTREACH ACTIVITIES AND BY OCCASIONAL GENERATORS:

The occupier of the health care facility organising the outreach activities is totally responsible for ensuring that waste generated during such activity is properly segregated, collected, treated and disposed of as per BMW Rules, 2016.

Steps for Bio Medical Waste Management for Out Reach Activities

1. Segregate biomedical waste at the point of generation i.e. during the outreach activity
2. Collection and packaging of waste in colour coded and bar code labelled bags/containers
3. Transportation of waste from outreach activity site to HCF
4. Treatment & disposal at HCF or CBWTF.



Dr. Anil Melath, MDS
Principal
Mahe Institute of Dental Sciences & Hospital
Chalakkara, P.O. Pallor, Mahe -673310
UT of Puducherry