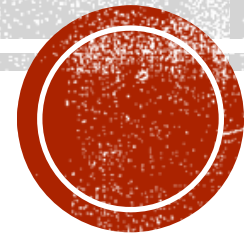


BIOMEDICAL WASTE MANAGEMENT RULES 2016: OVERVIEW, SALIENT FEATURES & IMPLICATION

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BMW Rules 2016

TITLE

Bio-Medical Waste Management Rules, 2016:
Promulgation: 28th March '16

APPLICATION

To all persons who generate, collect, receive, store, transport, treat, dispose, or handle bio medical waste in any form.

Not apply to:

- Radioactive wastes, (AEA, 1962)
- Wastes covered under the Municipal Solid Waste Rules, 2000
- Lead acid batteries,
- Hazardous wastes,
- E-waste,
- Hazardous microorganisms



BMW Rules 2016: DUTIES OF OCCUPIER

To provide a safe, ventilated and secured location for storage of segregated BMW within premises

Phase out use of chlorinated plastic bags, gloves and blood bags within two years from the date of notification of these rules

Provide training to all its health care workers and others involved in handling of bio medical waste

Immunization against Hepatitis B and tetanus for workers

Establish a Bar-Code System for bags or containers containing bio-medical waste to be sent out of the premises



BMW Rules 2016: DUTIES OF OPERATOR

Report major accidents and remedial measures to SPCB,

Ensure timely collection of BMW from healthcare facilities.

Handing over of recyclable waste to after treatment by autoclaving and incineration

Establish bar coding and GPS for handling within one year

Assist health care facilities in training of workers

Upgradation of existing incinerators and achievement of standards for secondary chamber

TREATMENT AND DISPOSAL

No healthcare facility shall setup onsite BMW treatment facilities if a CBMWTF exists within 75 kms of distance, to setup if no such facility.



BMW Rules 2016

SEGREGATION, PACKING STORAGE AND TRANSPORT

Bio-medical waste classified in to 4 categories based on treatment options.

No untreated bio-medical waste shall be kept stored beyond a period of 48 hours

If required to store beyond 48 hours, the occupier shall ensure that it affect human health and inform the SPCB with reason.

AUTHORIZATION

One time Authorization for Non-bedded HCFs.

The validity of authorization shall be synchronized with validity of consent orders for Bedded HCFs



BMW Rules 2016

MONITORING OF IMPLEMENTATION OF THE RULES: ANNUAL REPORT

Every occupier shall submit an annual report to the prescribed authority by 30th of June every year

The prescribed authority shall compile, review, analyze and report to the CPCB by 31st July every year

The CPCB shall submit a report on the same to the MoEFCC by 31st August every year

The Annual reports shall be available on the websites of the occupier, SPCB and the CPCB



BMW Rules 2016

MAINTENANCE OF RECORDS

Records in relation to generation, collection, reception, storage, transportation, treatment and disposal shall be maintained as per rules For 5 years

Biomedical waste management website

ACCIDENT REPORTING

Any major accident-intimate immediately and submit a report within 24 hours



3 BINS, 01 CONTAINER & 01 BOX

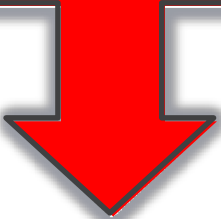
General waste



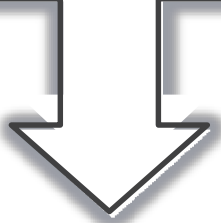
Human anatomical waste
Chemo drugs
Soiled waste
Expired or Discarded Medicines, soiled linen



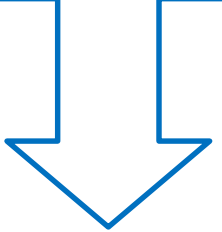
Contaminated Plastic Waste (Recyclable)



Waste sharps including Metals

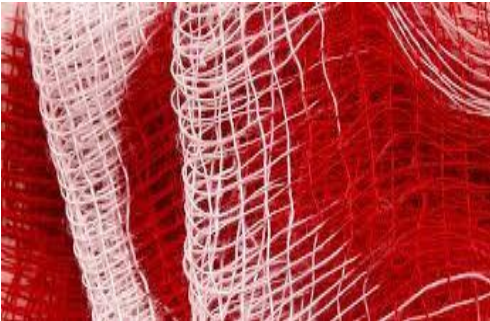


**Glassware:
Broken or discarded and contaminated glass including medicine vials and ampoules**



SCHEDULE I : YELLOW CATEGORY: SOILED WASTE

- (a) **Human Anatomical Waste:** Human tissues, organs, body parts and fetus
- (b) **Animal Anatomical Waste :**
- (c) **Soiled Waste:** Items contaminated with blood, body fluids like dressings, plaster casts, cotton swabs and bags containing residual or discarded blood



Incineration or Plasma Pyrolysis or deep burial



(d) Expired or Discarded Medicines including antibiotics



DRUGS

(d) **CYTOTOXIC DRUGS:** including all items contaminated with cytotoxic drugs along with glass or plastic ampoules, vials etc.



Common bio-medical waste treatment facility:
Incineration





LABORATORY WASTES & LINEN

Microbiology, Biotechnology and other clinical laboratory waste: Laboratory cultures, stocks or specimens of microorganisms



Pre-treat to sterilize with nonchlorinated chemicals on-site as per NACO or World Health Organization

LINEN: linen, mattresses, contaminated with blood or body fluid.



CHEMICAL & LIQUID WASTES

(g) Chemical Waste: Discarded disinfectants



Yellow coloured containers or non-chlorinated plastic bags



Disposed of by incineration or Plasma Pyrolysis or Encapsulation in hazardous waste treatment, storage and disposal facility.

(h) Chemical Liquid Waste
discarded Formalin, liquid from laboratories and floor washings, cleaning, etc.



Separate Collection system leading to effluent treatment system

**FORMALIN
POISON**



SCHEDULE 1- RED CATEGORY: PLASTICS

RECYCLEBLE WASTE

(a) Wastes generated from tubing, bottles, intravenous tubes and sets, catheters, urine bags, syringes (without needles and *fixed needle syringes*) and gloves



catheters, urine bags, syringes (without needles and *fixed needle syringes*) and gloves

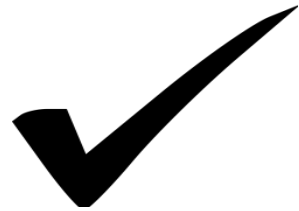


Autoclaving or micro-waving/hydroclaving followed by shredding or mutilation



SHARP CONTAINERS

Puncture proof, Tamper proof, Leak proof containers!!



SCHEDULE 1- WHITE



Waste sharps Including Metals:
Needles, syringes with fixed needles, needles from needle tip cutter or burner, scalpels, blades,
This includes both used, discarded and contaminated metal sharps



Autoclaving or Dry Heat Sterilization followed by shredding or mutilation



SCHEDULE 1- CATEGORIES AND THEIR SEGREGATION, COLLECTION, TREATMENT, PROCESSING AND DISPOSAL OPTIONS

Glassware:

Broken or discarded and contaminated glass including medicine vials and ampoules except those contaminated with cytotoxic wastes & Metallic Body Implants



Disinfection (by soaking the washed glass waste after cleaning with detergent and Sodium Hypochlorite treatment) or through autoclaving or microwaving or hydro claving and then sent for recycling.





बायो मेडिकल वेस्ट / BIO MEDICAL WASTE



मानवीय अंग एवं जीव वेस्ट

(मानवीय टिशू, शारीरिक अंग वेस्ट)

रक्त से सनी वस्तु

(पट्टी, प्लास्टर, ब्लड बैग)

अवधि समाप्त दवाइयाँ

(एंटीबायोटिक्स दवाइयाँ)

कैमिकल वेस्ट

(जेव-विज्ञान में इस्तेमाल कैमिकल)

रक्त से दूषित लीनेन, बिस्तर

लेबोरेटोरी वेस्ट

(ब्लड बैग, कल्चर, माईक्रोऑर्गेनिज़्म स्पेसिमेन)

पीला थैला / YELLOW BAG



Human & Animal Anatomical Waste

(Tissues, Organs, Body Parts, Fetus etc.)

Soiled Waste

(Dressings, Plaster Casts, Cotton Swabs, Residual/Discarded Blood Bags)

Expired or Discarded Medicine

(Antibiotics etc.)

Chemical Waste

(Discarded Reagents, Disinfectants)

Discarded Linen, Mattresses & Beddings

Pre-Treated Microbiology, Bio-technology & Clinical Lab Waste

(Blood Bags, Cultures, Residual Toxins, Dishes & Devices, Microorganism specimen)

साइटोटोक्सिक वेस्ट

(साइटोटोक्सिक दवाइयाँ से दूषित वायल, एम्प्यूल, प्लास्टिक इत्यादि)



Cytotoxic Waste

(All items Contaminated with Cytotoxic drugs along with glass or plastic ampoules, vials etc.)

रीसायकल योग्य इंफैक्टेड वेस्ट

(ट्यूब, बोतल, इंद्रावीनस ट्यूब और सेट, कैथेटर, यूरो बैग, बिना सूई की सिरिंज, वैक्यूटेनर एवं दस्ताने)

लाल थैला / RED BAG



Contaminated Waste (Recyclable)

(Tubings, Plastic Bottles, Intravenous tubes & sets, Catheters, Urine Bags, Syringes without needle, Vacutainers and Gloves)

नुकीला एवं धातु वाला वेस्ट

(सूई, सूई लगी सिरिंज, स्कालपेल्स, ब्लेड एवं अन्य नोकदार वस्तु)

सफेद डिब्बा / WHITE CONTAINER

(पंच, टैम्पर और लीक प्रूफ) / (PUNCTURE, TAMPER AND LEAK PROOF)



Waste Sharps Including Metals

(Needles, Syringes with fixed Needles, Needles from needle tip cutter or Burner, Scalpels, Blades, Contaminated Sharp objects)

कांच का वेस्ट

(टूटा हुआ कांच, दवाई की शीशियां एवं एम्प्यूल)

धातु वाले इम्प्लांट

गत्ते का डिब्बा / CARDBOARD BOX

(नीले चिन्ह के साथ) / (WITH BLUE MARKING)



Glassware

(Contaminated Broken/Discarded Glass, Vials, Ampoules)

Metallic Body Implants



TAKE HOME MESSAGE . . .

YELLOW has blood, drugs and tissues dead,

Plastics;tubes and syringe now go in **RED**,

Sharps in Containers lockable & white,

Black is for garbage; BMW not by right,

Card boards shall carry bottles and Glasses,

At AIIMS we insist, more and more classes!!



A close-up photograph of a person's hand, palm up, holding a glowing, translucent white sphere. The sphere is the central focus and contains the words "THANK YOU" in a bold, black, sans-serif font. The background is a plain, light gray surface. The lighting is soft, highlighting the contours of the hand and the glow of the sphere.

**THANK
YOU**