



**NATIONAL AGRICULTURAL HIGHER EDUCATION PROJECT**  
**(Project Implementation Unit)**  
**INDIAN COUNCIL OF AGRICULTURAL RESEARCH**  
**KRISHI ANUSANDHAN BHAWAN-II, NEW DELHI-12**  
**RFQ. No. 1(2)/2020-NAHEP(M&E)**



**REQUEST FOR QUOTATIONS**

Quotations are invited from eligible vendors for printing and supplying providing below mentioned various types of multi- colour posters for PIU-NAHEP as per required size and material. The designs are enclosed for reference.

S.No	Posters Classification	Size	Quantity	Quoted Rate (in Rs)
1	HWM Poster( Safe Disposal of Hazardous Chemical Wastes)	4' x 3'	15	
2	BMW poster( Segregation of Solid Biomedical Waste)	4' x 3'	15	
3	LCW poster (Safe disposal of laboratory culture)	4' x 3'	15	
			GST	
			Total Quoted Price (in Rs)	

Quotations may be sent in a closed and sealed envelope to the address given below along with copy of GST registration certificate. Last date for receiving quotations is 11.11.2021 till 16:00 hrs. The Quotation submitted by the Bidder should be valid for 30 days after the due date for submission of quotation. Delivery Schedule: The delivery should be completed within 30 days from the date of issuance of Supply order at Delivery location given below. Payment to be made to the Supplier shall be made within seven working days in 100% on successful delivery and receipt of the goods at the delivery location and raising of invoice.

**Deputy Secretary**  
**National Agricultural Higher Education Project**  
**Project Implementation Unit**  
**5th Floor, KAB-II, PUSA Campus, New Delhi- 110 012 (India)**  
**E-mail: diliproj.icar@nic.in / 01125848772**



# Safe disposal of Laboratory Culture



## SHARPS CONTAMINATED WITH BIOLOGICAL WASTE

Sharps are the items that are capable of puncturing, cutting or abrading the skin, e.g., needles, scalpel blades, slides and cover slips. Sharps are deactivated by autoclaving. Place sharps in a container that is white, rigid, puncture resistant, leak-proof and labelled with the biohazard symbol.

- Autoclave sharps container for a minimum of 30 minutes at 121°C and 15psi.
  - Log the autoclave run duration, quantity of processed waste, date, and operator.
  - Label the sharps container with the words “autoclaved”.
  - Deface any biohazard symbols.
  - Dispose of the container.
- a. Submit an authorized agency. Note on the request that the container has been autoclaved.
  - b. Leave autoclaved container collection point to pick up by agency.

## LIQUID WASTE

Liquid wastes, e.g., cell culture media and serum, are deactivated either by autoclaving or chemical disinfection. Most liquid wastes can be deactivated with bleach.

- Chemically disinfect with a 1:10 final dilution (vol/vol) of household bleach.
- Swirl flask contents and allow a contact time of 30 minutes.
- Pour down a sink drain connected to the campus sewage system and flush the plumbing with an excess of water.

OR

- Alternatively, liquid waste may be autoclaved for 30 minutes at 121°C and 15psi.

## SOLID WASTE

Solid biological waste, e.g., pipettes, tissue culture flasks, and multiple well plates, is typically deactivated by autoclaving:

- Collect solid biological waste directly into autoclavable bags.
- Tie a knot using the upper third of the bag and affix heat sensitive indicator tape near the knot
- Use a secondary container for all autoclave bags until disposal.
- Ensure the autoclave operates for 30 minutes at 121°C and 15psi.
- Log the autoclave run duration, quantity of processed waste, date, and operator.
- Deposit the bag in the red-lidded totes designated for laboratory waste.

## Do's and Don'ts

- Access to the laboratory is limited or restricted when experiments are in progress.
- Should use mechanical pipetting devices.
- Should wash hand after handling the material and before the exiting the laboratory.
- Should wipe the experimental bench with a cleaning agent

- Do not do mouth pipetting.
- Do not eat, drink, smoke, and not apply cosmetics in the work area.
- All other tubes and tips used in the project do not come in contact with the bacteria

### Environmental Safeguard Measures

ICAR-National Agricultural Higher Education Project  
PIU, 5th Floor, Krishi Anusandhan Bhavan-II, New Delhi-110012

<https://nahep.icar.gov.in/>



# Safe Disposal of Hazardous Chemical

## Storage of Waste

- Never store waste in the labs more than 180 days (6 months)



- Hazardous materials are **Never** to be disposed of in the sink nor intentionally evaporated!
- Waste solution may be poured to the sewer lines after fulfilling the discharge norms prescribed for CETP.



## Safety Measures

- Always keep container in good condition with no leaks or cracks.
- Always pour waste through funnel and close the lid tightly.
- Always segregate hazardous waste from other incompatible wastes.
- Always store in clean and compatible secondary containment.
- Always Label chemicals clearly with permanent stickers.



## Role of University

- To ensure safe and environment sound management of hazardous waste.
- To ensure that waste generated in labs disposed off in an authorised disposal facility.
- To provide containments to prevent accidents and limit their consequences on human being and environment.
- To provide training to the members involved in segregation, storage and disposal system.
- To provide information necessary to ensure safety inform of display poster, etc.

## Do's and Don'ts

- Wear safety equipment like gloves, boots, goggles, overalls, aprons, while handling. Always have a second person to assist, while handling the chemicals.
- Read all labels prior to handling or moving chemicals.
- Label chemicals clearly with permanent stickers.
- Segregate waste as hazardous and nonhazardous waste.
- Always dilute acids at a ratio of approximately 1:10 prior to neutralization.

- Don't mix unknown chemicals together and dispose.
- Don't store/ keep chemicals on floor.
- Don't use the chemicals from unlabeled containers.
- Don't eat, drink, gum chewing, during the disposal process.
- Don't sweep spilled chemicals with broom.
- Don't dump cloth soaked in spilled chemicals in waste bin.
- Don't use mobile phone while handling disposals.

## Attributes of Hazardous Waste



**Corrosive materials**  
Examples: Hydrochloric Acid, Sodium Hydroxide



**Flammable materials**  
Examples: Alcohols, Acetone, Ethers, Acetic Acid



**Air or water reactive materials**  
Examples: Zinc Dust, Magnesium Metal



**Oxidizer's materials**  
Examples: Concentrated Hydrogen Peroxide, Potassium Permanganate, Bleach



**Toxic materials**  
Examples: Mercury, Ethyl Acetate, Formaldehyde, Ethidium Bromide

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## Role of university

- In providing safe, ventilated and secured location for storage of waste
- In segregation of biomedical waste as per the colour codes
- In providing vaccination to all staff members involved in handling the biomedical waste
- In providing personal protective equipment's to staff members involved in handling the waste
- In providing training to all the staff members involved in biomedical waste management
- In arranging regular health check-up for staff members (handling waste) atleast once in year
- In making available the annual report with all health care facility on university website

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