

Procedures and Policies for Disposal





Plan for Disposal Procedures

It is responsibility of all staff and students to ensure the safe and correct disposal of all wastes produced in the Institution. Improper and irresponsible disposal of chemical wastes down drains, to the Local Authority refuse collection, or into the atmosphere is forbidden by law.

Wash down drains with excess water

- Concentrated and dilute acids and alkalis
- Harmless soluble inorganic salts (including all drying agents such as CaCl_2 , MgSO_4 , Na_2SO_4 , P_2O_5)
- Alcohols containing salts (e.g. from destroying sodium)
- Hypochlorite solutions from destroying cyanids, phosphines, etc.
- Fine (the grade) silica and alumina

It should be noted in particular that no material given below should ever be washed down a drain.

- compounds of the following elements:- antimony, arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, tellurium, thallium, tin, titanium, uranium, vanadium and zinc.
- Organ halogen, organophosphorus or organ nitrogen pesticides, triazine herbicides, any other biocides.
- Cyanides
- Mineral oils and hydrocarbons
- Poisonous organosilicon compounds, metal phosphides and phosphorus element .
- Fluorides and nitrites

Incineration (Solvent Waste collection)

- All organic solvents including water miscible ones
- Soluble organic waste including most organic solids paraffin and mineral oil

Laboratory waste bins and controlled waste

All waste suitable for the Local Authority refuse collection, except recyclable paper and glass, is termed 'controlled waste'. Items in this category which includes dirty paper, plastic, rubber and wood, should generally be placed in the waste bins available in each laboratory and will be collected by the cleaners. However, each laboratory must also have a container for certain items which are not allowed to be put in the normal waste bins. In this special controlled waste container should be put:- all broken laboratory glassware, any sharp objects of metal or glass, all fine powders (preferably inside a bottle or jar) and dirty sample tubes or other items



lightly contaminated with chemicals (but not any syringes or needles). Laboratory controlled waste containers must be emptied regularly and never allowed to overflow.

Under no circumstances must any item of glass, sharp metal or fine powder ever be put in a normal laboratory waste bin, The tops must be removed from all bottles put out for disposal and there should be no detectable smell of chemicals from any bottle put for disposal.

Waste for special disposal

Special waste must be collected in a separate labelled bottle or jar for disposal. On no account must different types of waste be mixed Only the following items should be disposed of in this way:

1. highly toxic chemicals
2. Materials heavily contaminated with substances
3. Materials contaminated with mercury
4. Carcinogenic solids including asbestos.

Glass recycling

For environmental reasons the recycling of glass is encouraged, but only certain items of waste glass produced within laboratories are acceptable for recycling. Each laboratory should have a bin for recyclable glass. Only clean glass bottles such as those in which chemicals are received, and broken or waste plate glass are allowed. All broken laboratory glassware, items significantly contaminated by chemicals, sample tubes, droppers and glass wool must be disposed of as controlled waste. The recycling service will refuse to empty a recycling container if any of these prohibited items is discovered in it.

Bottles for bulk solvents

The importance of returning the specially labeled Winchester's for solvents which are bought in bulk to the Store ready for direct refilling is emphasized. They must not be contaminated in any way and should not normally be washed out. Bottles containing sodium must not, under any circumstances, be returned directly to the Store. When sodium is first added to a bottle of solvent a label indicating this (available from the Store) should be attached. When the bottle is empty the sodium must be safely destroyed by adding ethanol or methylated spirit and the label removed. The bottle must then be washed out, dried and returned to the Store ready for direct refilling.

**Late Shri. Vishnu Waman Thakur Charitable Trust's
Bhaskar Waman Thakur College of Science
Yashvant Keshav Patil College of Commerce
Vidhya Dayanand Patil College of Arts
(VIVA College)**



Empty Winchester bottles may be re-used e.g. for the disposal of waste solvents. They must first be washed out with water if they have contained a corrosive or harmful chemical e.g. concentrated acid or ammonia.

Biohazard/Sharps Disposal - Syringes and Needles

"Sharps" contaminated with biologically hazardous materials must be collected in special containers to be sent for incineration. It is also required that all syringes and needles of any type should be disposed of by the same route. No syringes or needles must ever be put in a laboratory waste bin or controlled waste container.

New and existing practices regarding waste disposal in our laboratory.

- Media with culture is autoclaved and thrown in plastic bags.
- After dissection of animals, the leftovers are disposed of with proper precautions to avoid damage to the environment.
- For example, Microtips used in the laboratory are reused after autoclaving it rather than putting it in the dustbin.
- Students as well as non teaching staff have been given instructions for the same.
- Bins meant for such wastes are covered with black polythene bags.
- All types of wastes including bio hazardous waste were dumped in common bins. We implemented a plan for Waste disposal for students and staff members.
- Currently for the biological waste of potential hazard such as blood or blood containing specimens and/or samples autoclaving is carried out followed by the addition of phenyl. After the above- mentioned treatment the waste is discarded in the sink.
- Reuse of cotton plugs as swabs for disinfecting the table tops etc.
- Reuse of thermocol boxes meant for instruments and kits.
- Reuse of paper with one side printing for notes making etc.
- Boxes and paper wastes are reutilized during the inter-collegiate festival Vivaxious



Anojal

Principal